

Design

Council of Industrial Design

148

April 1961

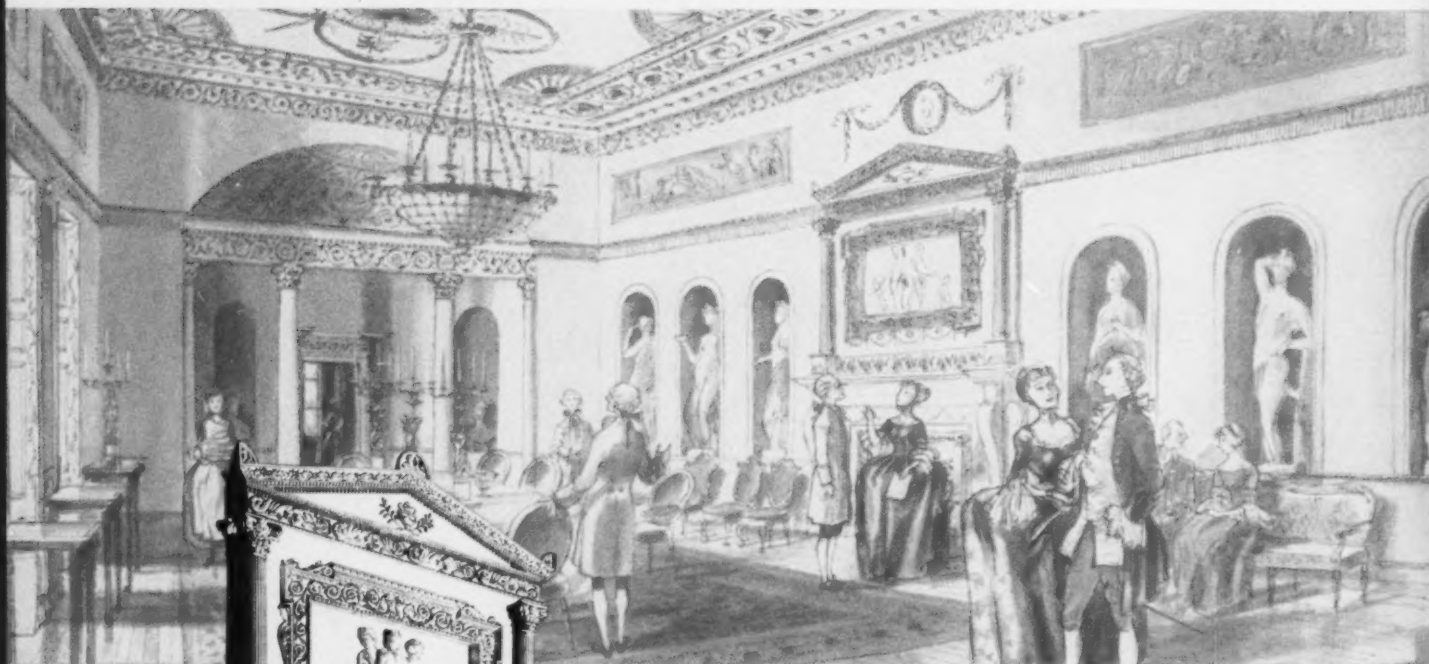
Price 3s



PROFILE OF A CREATIVE MIND

No. 18 *Interior Decorator*

Robert Adam (1728-1793) has left as deep a mark on English interior decoration as on architecture. After some years in Italy, studying Roman architecture, he was appointed sole architect to George III and the Board of Works in 1762.



It was Adam's view that the architect should concern himself intimately with the furniture and interior decoration of a building, as well as its form and construction.

He practised this rigorously and with great success, aiming always to create a perfect whole, with no one feature standing out at the expense of others. Mouldings and decorations, for example, contributed their share, but no more, to the total effect. Syon House, Middlesex, is a supreme example of Adam's art in interior decoration. Although he had had no hand in the design and construction of the building, his particular genius brought about a marriage of interior and exterior that is well-nigh perfect. He produced a light, graceful interior with that sense of atmosphere and refinement of detail that make an Adam house a unique example of English art.

In I.C.I., creative minds are constantly searching for new products and processes, and for improvements to existing ones.






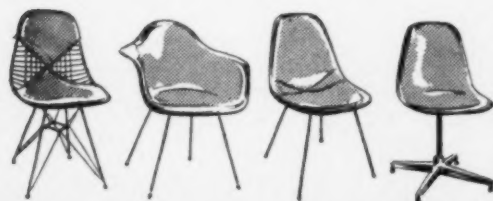
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Originals by Herman  iller of America

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ALUMINUM GROUP—ALUMINIUM GROUP Hille have anglicised the name but otherwise are producing chairs and tables identical with those created by Charles Eames for Herman  iller of America. At right you see the lounge chair, at left the



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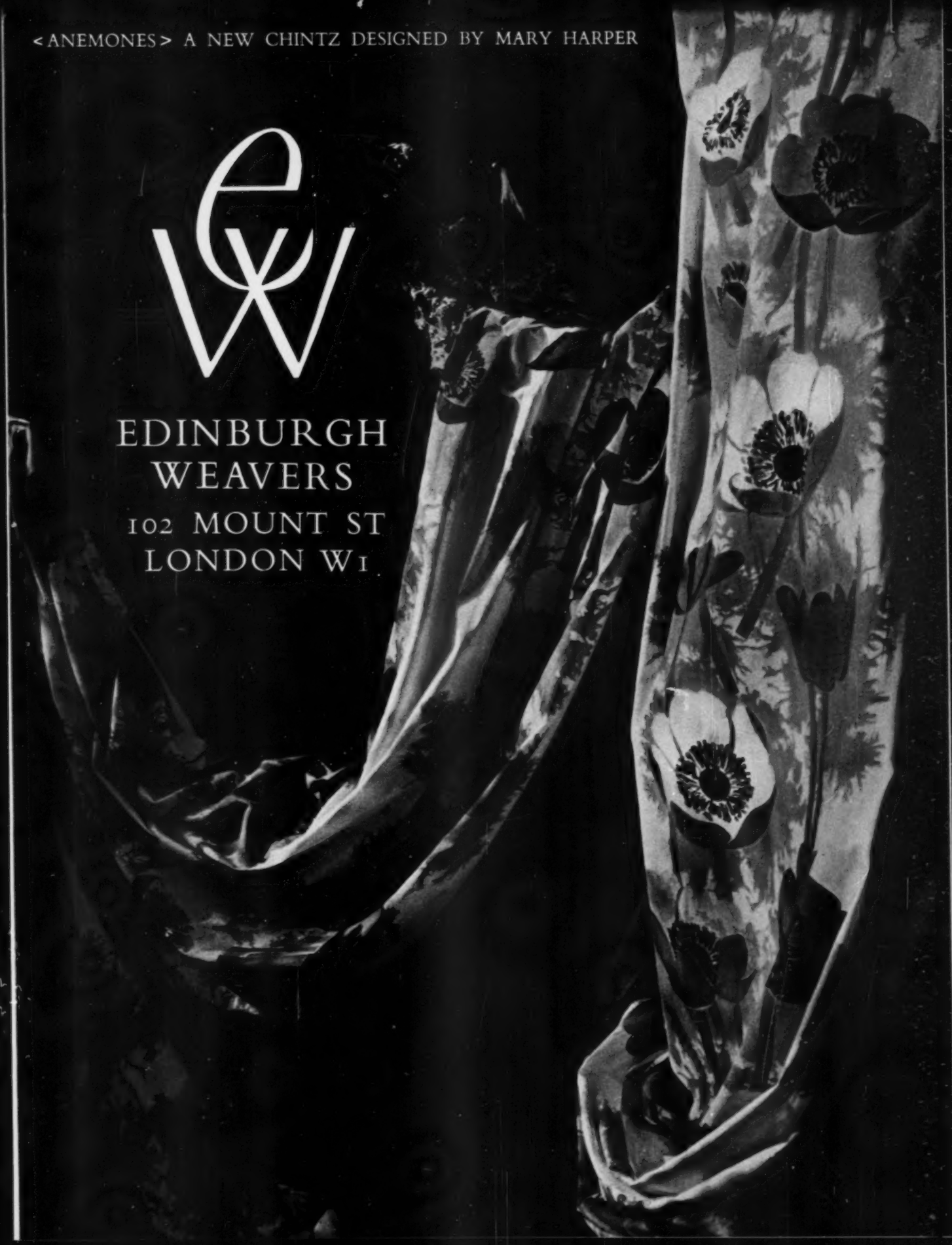
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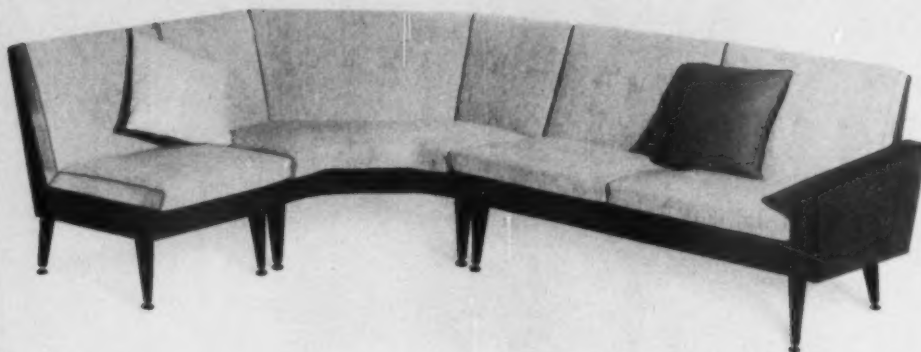
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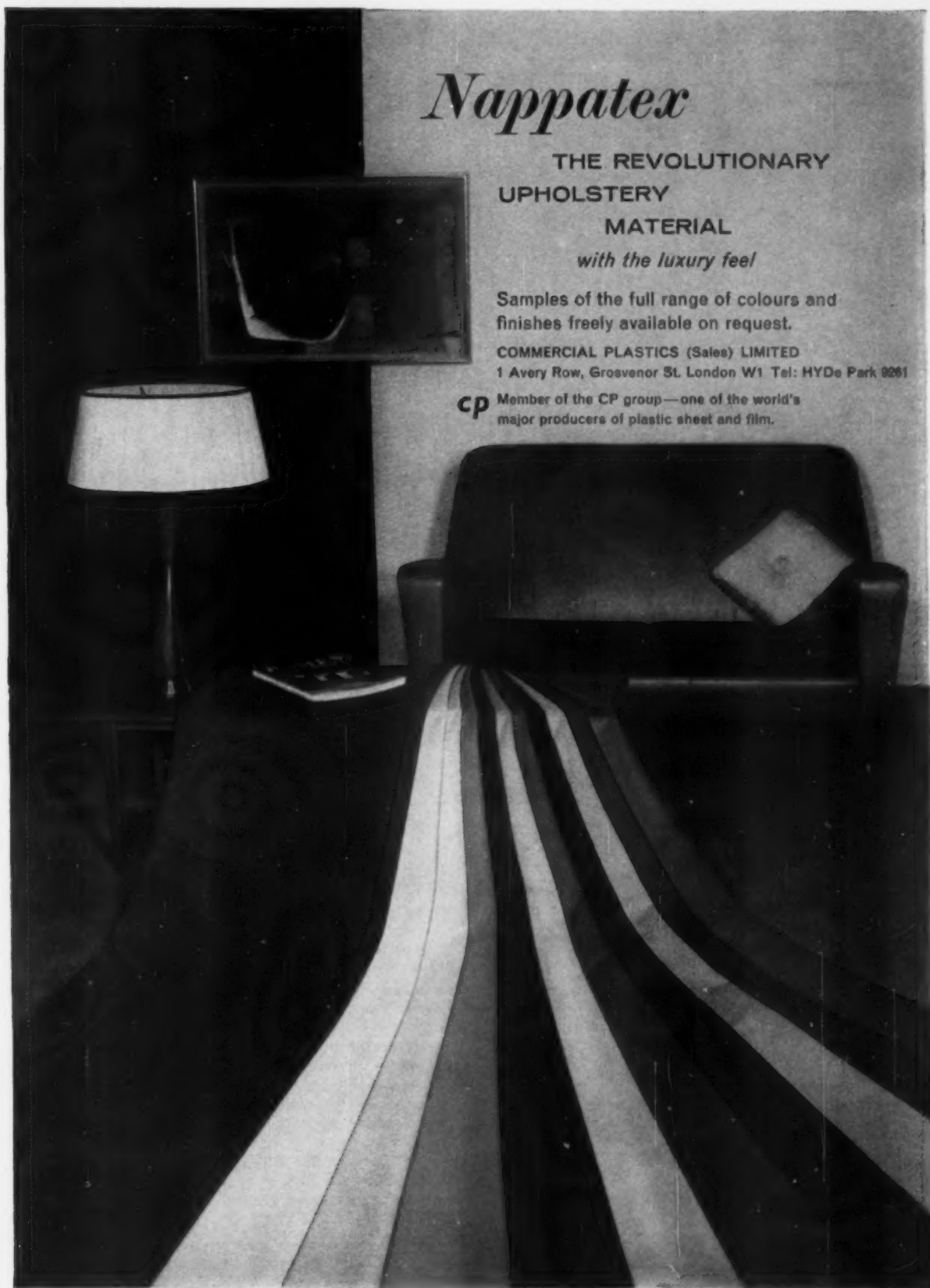
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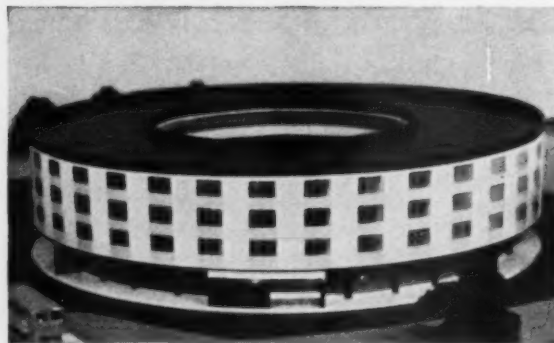
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Why the designer chose Bri-Nylon Shildon

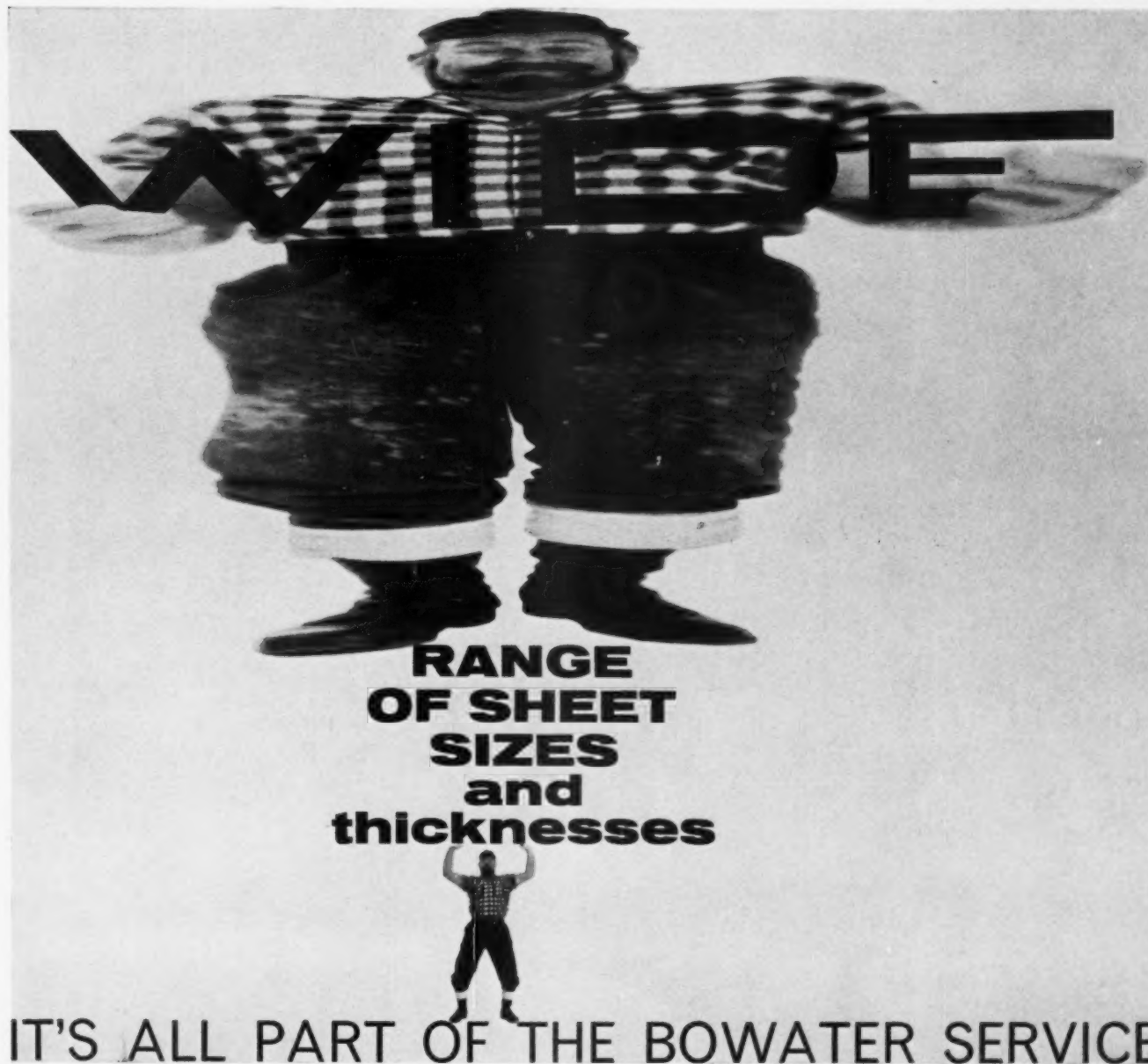
- BRI-NYLON SHILDON outwears all ordinary carpets—replacement costs disappear.
- BRI-NYLON SHILDON has deep luxurious tread, because it has its own foam-rubber underlay built-in.
- BRI-NYLON SHILDON defies stains, including tea, coffee and food stains; even ink washes off readily.
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Architects to the Ariel Hotel: Russell Diplock Associates; Consultants, F. L. Wills & Son

Bedroom Interior Design: Russell Diplock Associates in conjunction with J. Marshall F.I.B.D.

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'Perspex' shows Guinness time by day and night

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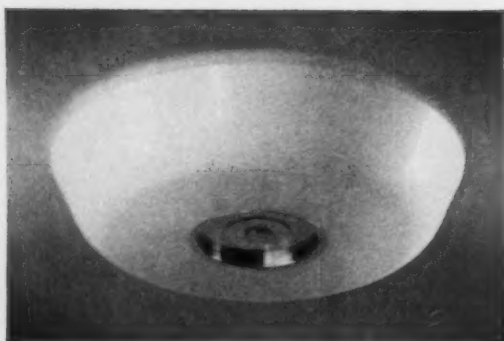
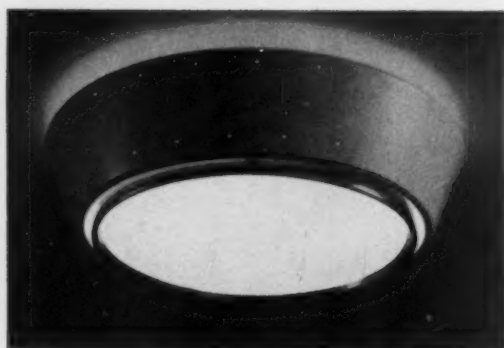
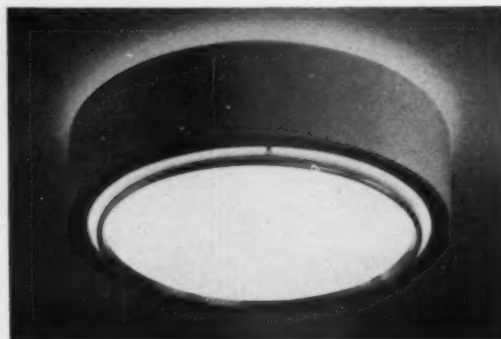
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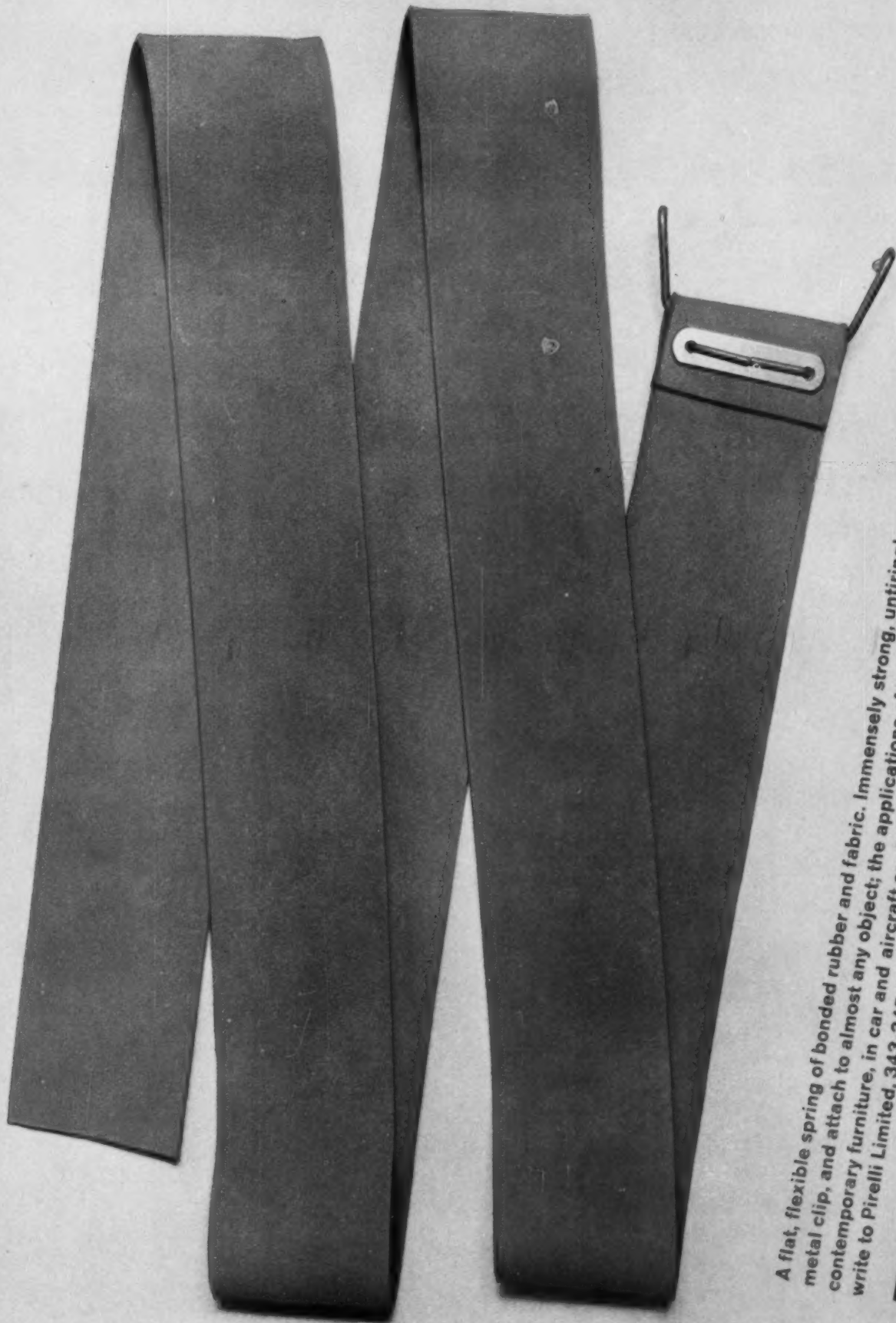
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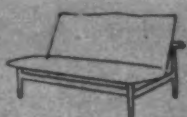
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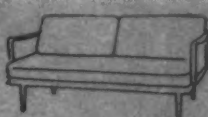
In solid teak, upholstered chair by Finn Juhl, £34.0.0.



In solid teak, 4 ft. upholstered settee by Finn Juhl, £48.0.0.



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In solid teak, coffee table by Edv. Kindt-Larsen, £25.10.0.



In solid teak, upholstered chair by Finn Juhl, £29.10.0.

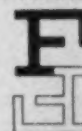


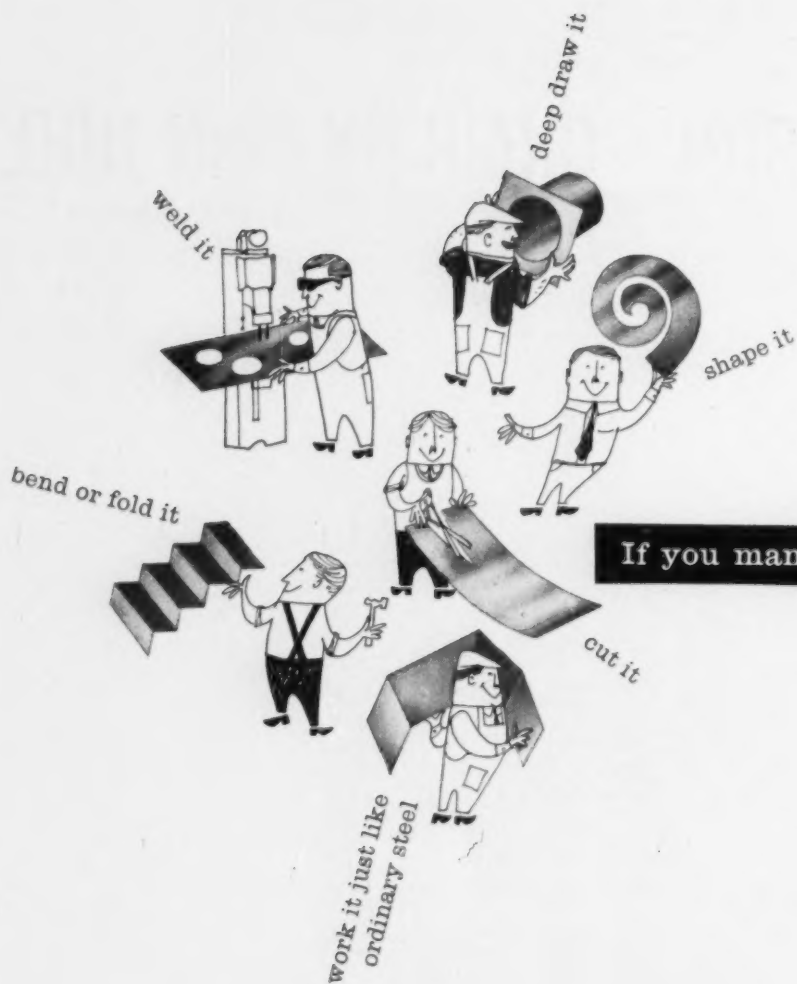
Finn Juhl, Danish architect, is one of the designers who inspire furniture of timeless elegance and simple comfort, made at Hillerød, Denmark, by 300 craftsmen in the factory of France & Son. See it at the new showroom, 18 New Bond Street, London, W.1.

The teak bowl is also by Finn Juhl: from Georg Jensen Ltd., of New Bond St.

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You are cordially invited to visit the Peacock Room at Farringdon House, Warwick Lane (Off Newgate St.) E.C.4. Enquiries to:

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British Aluminium furniture design competition



The British Aluminium Company Ltd announces a competition for the design of aluminium furniture. A major purpose of the competition is to foster an appreciation of aluminium as a modern furniture material and to encourage its wider use by designers and manufacturers.

The rules of the competition require the design of a single article or a group of related articles – to be used either indoors or outdoors, and in the domestic, industrial, institutional or public service markets. In judging designs the criteria will be: originality · function · ease and economy of manufacture · appearance · suitability of material for the application. Entry will be by design sketches, and winners will be asked to collaborate on full working drawings.

The first prize will be **£250**; second prize **£150**; third prize **£75**. In addition, there will be a special prize of **£50** for the best entry from a student providing it does not qualify for the first three prizes.

The judges will be: Mr. Alec Gardner-Medwin, of the Council of Industrial Design, Mr. Ashley Havinden, OBE, RDI, PPSIA, Mr. Nigel V. Walters, FSIA, Mr. Basil James, Mr. Alec B. Kirkbride, BA.

The closing date of the competition is 30th June, 1961.

Full details of the competition, together with entry forms, may be obtained by writing to: Furniture Design Competition, The British Aluminium Company Ltd, Norfolk House, St James's Square, London S.W.1.

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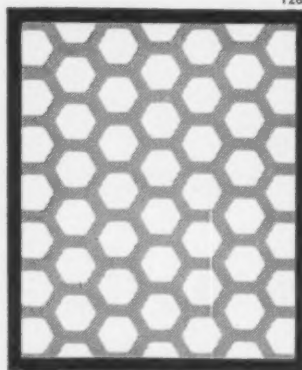
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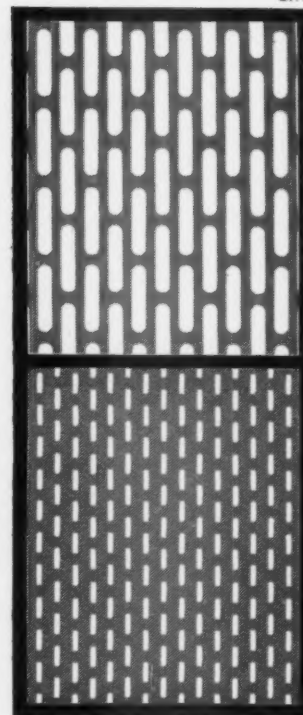
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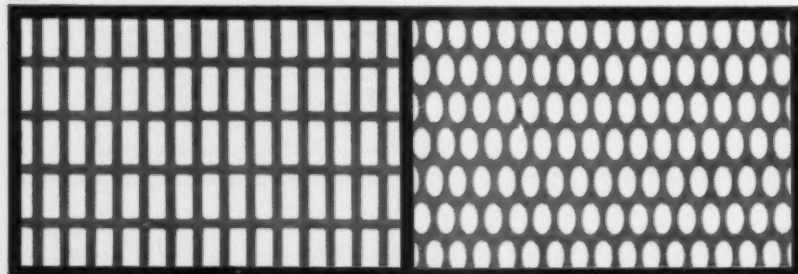
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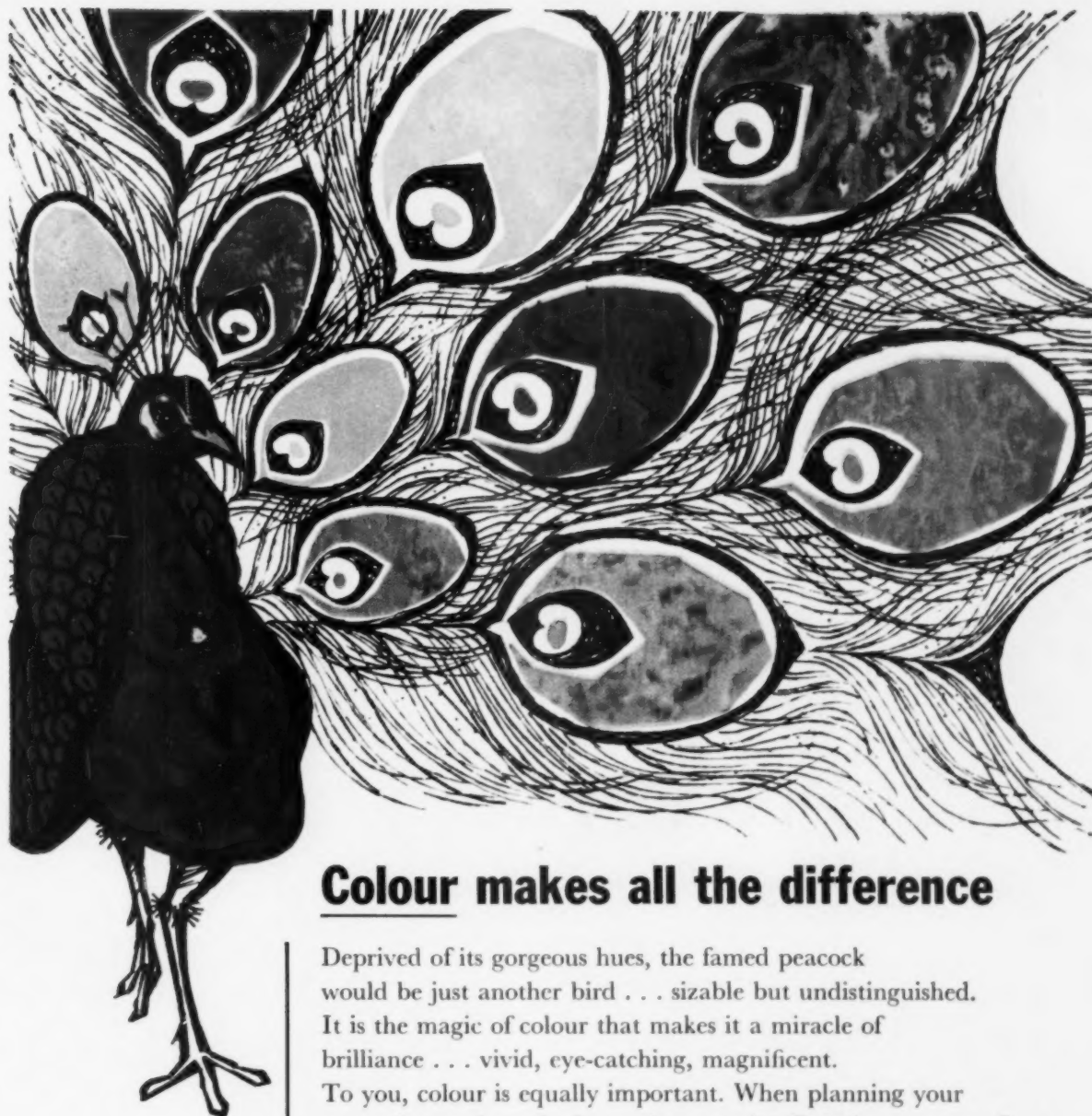
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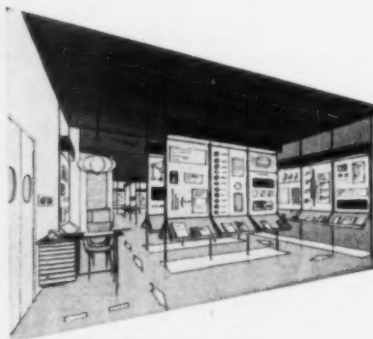
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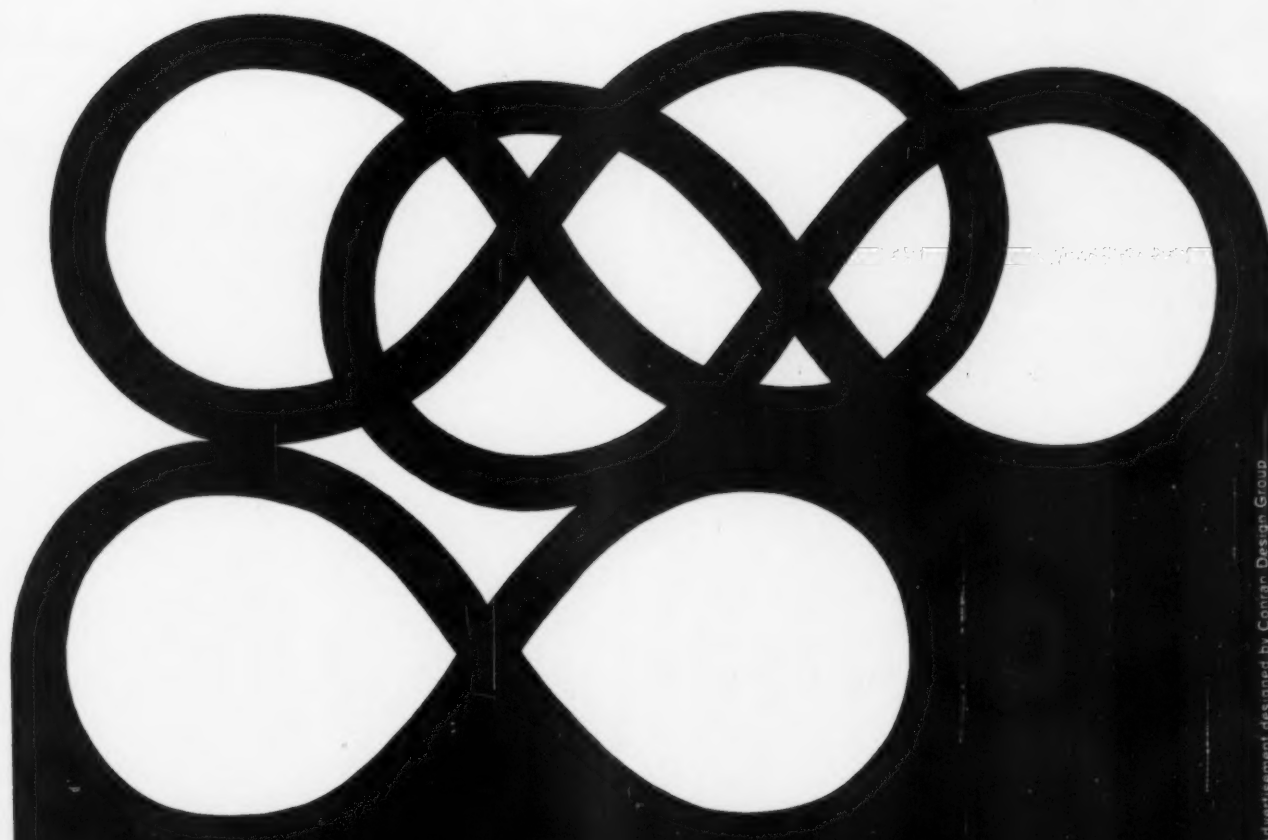
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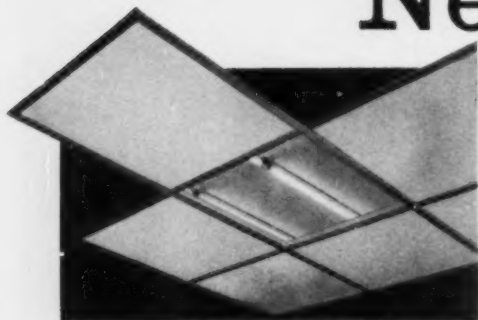


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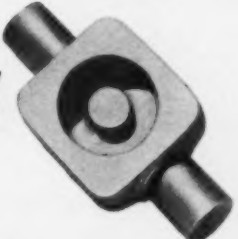
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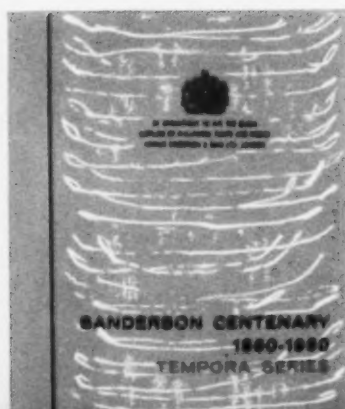
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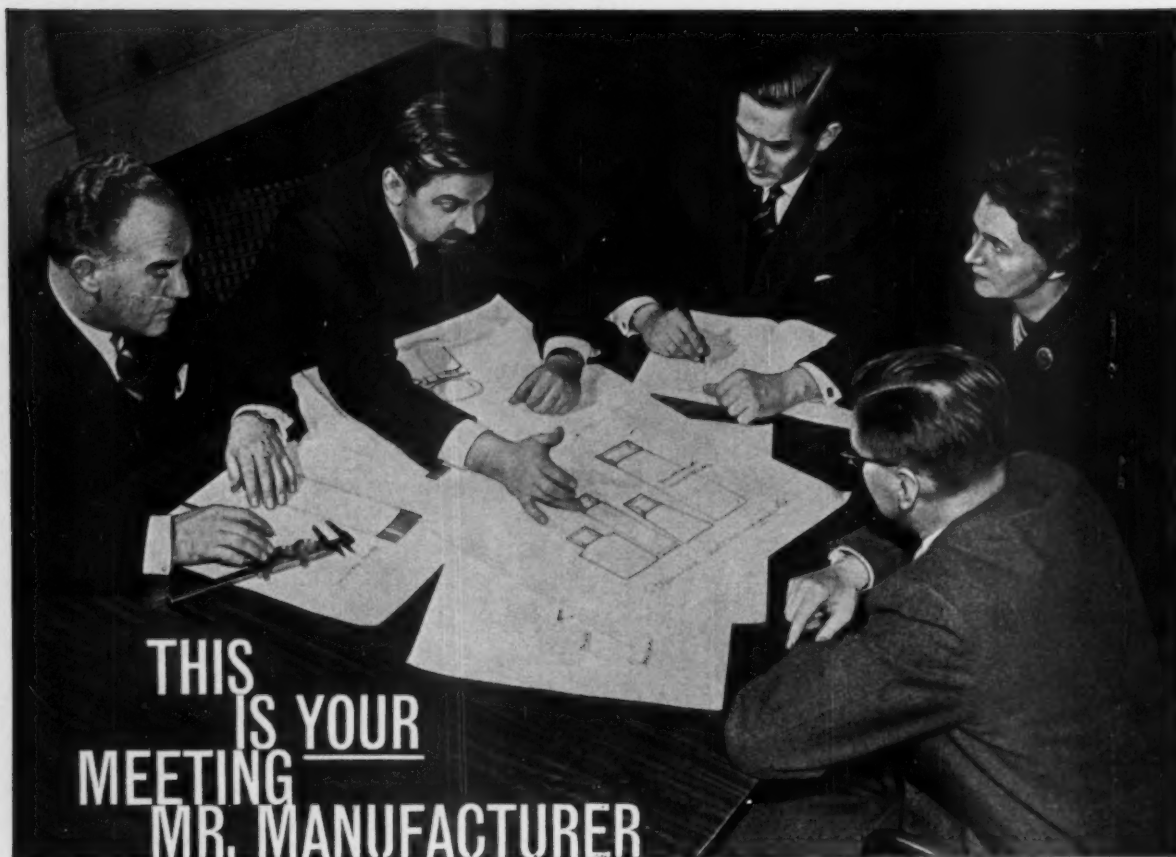
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The need for advice from industrial designers is becoming increasingly apparent in the capital goods industries. But the designer of capital equipment is faced with many complex problems and needs a constant frame of reference in his man-machine analysis. This first article in a new series provides such a reference from which more detailed analyses can spring

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This article, the fifth in a series on the British Transport Commission's modernisation schemes, deals with stations, both new and improved, and station equipment. The author sees the trend towards co-ordination in the design of the station shell and its contents as the first step towards the establishment of a new railway aesthetic

64 **Domestic food mixer** *Malcolm J. Brookes*

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USA: selling aluminium: the new way *Peter E. M. Sharp*

The marketing organisation of a raw materials manufacturer emphasises the need for good design, backing its sales technique with comprehensive facilities for both user and designer

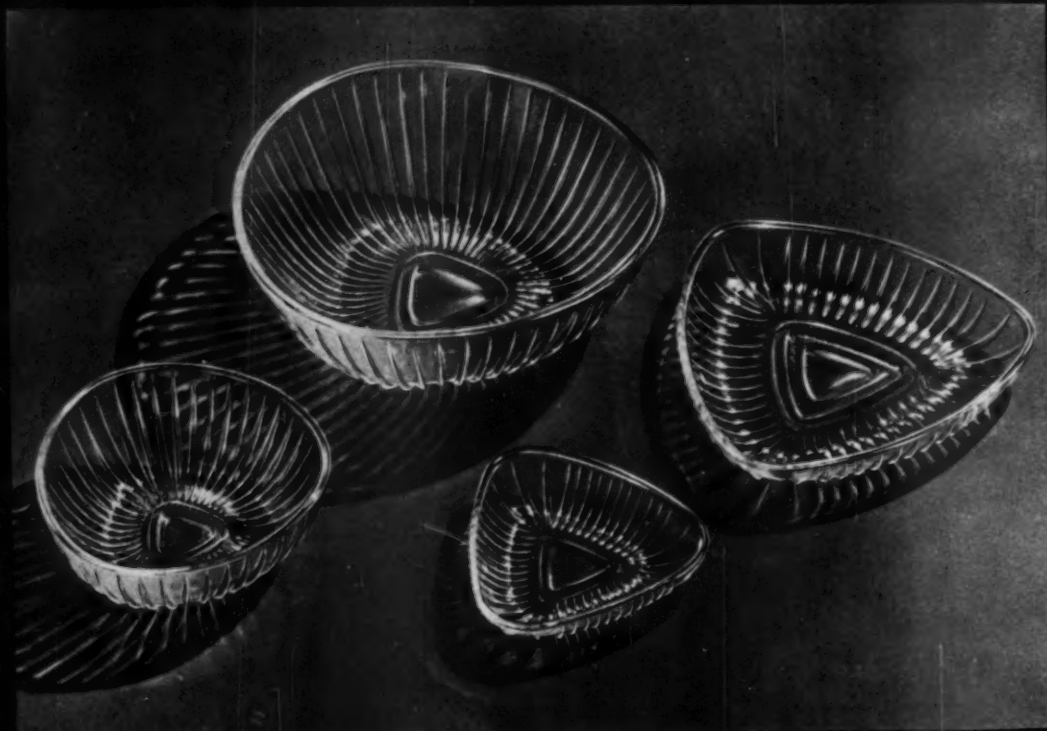
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Training in competence

What demands will be placed on the designer during the next few decades?
How best can he serve the requirements of our modern industrial society?
What sort of person should he be?

These questions are not new. Indeed they have been asked many times before by those who are intimately concerned with the training of designers. That agreement on the answers is urgently needed at the present time is due to the fact that the whole structure of art and design education is now being reorganised on a national scale. And while the first report of the National Advisory Council on Art Education (DESIGN 146/67) clears up the administrative background to the subject, the more fundamental problems have yet to be tackled.

The proposed courses, published in this issue, are not intended as finite solutions. What they do reveal, however, is an emphatic belief on the part of both authors that the designer will have a more complex, difficult and infinitely more important job to do in the future than he has had in the past. Whether we like it or not, we must admit that the industrial designer still tends to be regarded essentially as an appearance man with enough technical know-how to see him through the normal manufacturing difficulties that are likely to arise. In the years to come this clearly will not do.

Both of the proposed courses, in differing degrees, suggest that the new type of man needed must master a wide range of technical, human and social disciplines if he is to fulfil his expanding role. This is a logical development of the conceptual approach to design – the idea of design as a creative unifying process – which has been the peculiar contribution of traditional art school methods, and is noticeably lacking in training courses for engineers. As such it would provide a firmer basis for assessing educational standards, the vagueness of which in the past has been one of the biggest stumbling blocks to a greater respect for the design profession. In particular it would prescribe a minimum level of competence in the subjects studied which could be examined according to agreed standards.

Already the Society of Industrial Artists is considering an examination for membership which will shift the emphasis in selection away from aesthetic standards towards standards based on technical and professional competence. Such a change is certainly desirable but is not enough in itself. What is needed is that the standard of competence required for the new Diploma in Art and Design (Dip/AD) should be equated with that for SIA membership. If this were achieved the design profession would well be on the way to acquiring a status equivalent to the related profession of architecture whose own standards are widely respected.

J.E.B.



POINTERS

Bigger centre for Scotland

Next month the Scottish Design Centre, at 46 West George Street, Glasgow, will be re-opened by Sir Gordon Russell with about a third more exhibition space than it has had since it first opened in 1957. This extension will enable the CoID Scottish Committee to install a replica of 'Design Index', provide more space for its book and periodical library and increase the number of exhibits permanently on display to over 500. Considerable structural difficulties have had to be overcome by Baron Bercott, the architect for the scheme, but when completed the centre will provide the most comprehensive permanent display of good design in Britain outside London.

Scotland, with her traditions of skill and craftsmanship in heavy engineering, has been slower to accept the need for new attitudes to design than the consumer goods industries further south with their more pressing marketing problems. However, industries in all parts of the world are finding it increasingly difficult to survive without an imaginative approach to design and both the new and the old industries in Scotland will benefit from the extended facilities the new centre will be able to provide.

Anthropometrics in imports

The exhibition of Swedish furniture, which was held in London concurrently with our own *Furniture Show*, provided a foretaste of the type of competition we can expect on our own home market within the European Free Trade Association. The consistently high standard of the designs displayed no superficial concession to good taste but stemmed from a realistic concern for fundamentals. Sound workmanship and construction were evident in most examples. But more important was the widespread application of anthropometric data for chairs and tables.

The heights of these Swedish tables and chairs relate closely to those recommended by the British Standards Institution.* And if the BS recommendations are sound, as we believe them to be, then it seems likely that the British public is going to find Swedish chairs and tables more comfortable to use than the majority of those by manufacturers in this country. The Swedish examples were by no means perfect in all details. But at the British *Furniture Show* there was little sign that the BS recommendations were being applied at all. With a few notable exceptions the majority of tables and chairs were anything

* *Anthropometric Recommendations for Dimensions of Non-adjustable Office Chairs, Desks and Tables*, BS 3079: 1959, 4s

from $\frac{1}{2}$ inch – 2 inches above the recommended dimensions. The warning note has been clearly sounded.

Berserk with furniture

This lack of attention to one of the most important aspects of design was not the only disappointment of the *Furniture Show*. The steady progress that has been apparent in recent years seemed suddenly to have disintegrated, and the industry appeared to have been scraping the barrel in the effort to find some gimmick which, by a quirk of fate, had been overlooked before. Reproductions of every conceivable period were, of course, in abundance. But the variations on 'modern' were legion, and the total impression was that the designers' flights of fancy seemed to have been stretched to the ultimate.

Among all this there was plenty of good work to restore the faith of the wilting onlooker and to point to the commonsense of simple proportions and carefully chosen materials. This year, however, they seemed to stand out rather forlornly as oases of sanity in a world suddenly gone berserk. It was hardly surprising that the two outstanding products were by the American designer Charles Eames. One could see just why the stature of this giant among designers has received such world-wide recognition.

Growing envy

Any despondency over the general run of products at the *Furniture Show* was completely alleviated, however, by the ambitious and delightful display, *The Growing Home*, designed by Gordon and Ursula Bowyer. This display showed four versions of the same home at different periods in the life of a husband and wife and their two children. As they grew more prosperous they converted their home to meet their new requirements, used their earlier purchases in new ways and bought new things.

How envious of these cool, suave and well ordered interiors were those of us with families of our own. What sad comparisons we forced ourselves to avoid in our efforts to see it all objectively. Earlier reports had indicated the bread-winner as a professional man. What profession, we wondered, as we came to the inevitable conclusion that ours was most definitely not the one?

It would have been interesting to see what the Bowyers would have done with mum's throw-outs or the junk-shop purchases bought in a hurry to fill a pressing need. But then, who would want to look at that?

◀ The art editor's page

The editorial pages of magazines dealing with subjects like architecture and industrial design (and this one is no exception) seem usually detached from actual life. Human beings appear only occasionally in them, often looking like guilty intruders on a scene of mechanised tranquillity. I hope this photograph shows that we are not completely resigned to the situation.

From the day when it takes its first pull on a rubber teat, the child is a victim? beneficiary? of the industrial designer; and from the time when it first grasps a pencil – like a weapon – and stabs out an idea on a piece of paper, it is a potential recruit to the expanding practice of design. Whichever way you take it, the children are watching us.

Photograph by Josef Gross

Previous articles on the machine tool industry have argued that technical research, though of vital importance, should not obscure the need for a more progressive attitude to the over-all design of machine tools. Yet there are few industrial designers who are familiar with the complex problems involved in this industry's products. A constant frame of reference is becoming necessary as a guide to the designer if he is to make a valid contribution in this field. In discussing the*

CONTROL LOOP CONCEPT

of the relationship between man and machine, this first article of a new series provides a generalised framework which can be referred to during all stages of the design process. Subsequent articles will examine in detail the main components of the loop as the basis of a critical assessment of different types of machine tool.

W. H. MAYALL and B. SHACKEL

The man at the machine works within a framework of many influences. The diagram, 1, OPPOSITE, shows only the physical influences on him. Add to these managerial, social and personal relationships; consider with them the man's motives, aptitudes and intelligence; and it would still be impossible to gain a complete picture of the intricacy of this framework. Change one factor and it may alter others; look at the man on the next machine and the framework may be different; examine it too narrowly from one viewpoint and it may warp to suit one's wishes.

The designer who sets out to "design for people", as Henry Dreyfuss puts it, and more particularly the designer designing for people at work, should therefore be cautious in his claims. For example, it is all too easy to overstate the importance of good machine appearance as a stimulant to better and happier working conditions; but such a view is likely to be true only if it is seen to be part of an overall concern for people at work. Again, design changes, though clearly advantageous, may well be met with suspicion or may even be rejected because they eliminate an acquired skill, 2. Though such changes usually come from the engineering designer, rather than the industrial designer, their effect must be appreciated for the industrial designer may also offend against traditionally accepted shapes. On occasions resistance to new design concepts can come as much from users as makers; in fact this is a common

excuse for avoiding new approaches to design.

While this attitude is receding it must, together with questions of skill and organisational values, be acknowledged by the industrial designer. It is not so much a question of restricting design concepts to suit the market or adjusting a design so that an operator's skill is not offended. Progress cannot be impeded by such measures for there may be less inhibited customers to serve elsewhere. Rather it is a matter of approaching the machine with one controlling objective in mind. The more generalised views regarding the value of improvements in design may then be suggested with a due regard to at least some of the other circumstances which influence people at work.

Everything and everyone in the production process must be working to obtain the greatest output for the least effort. Engineering designers and factory management work to this objective in machine development or in work administration. The objective has created a 'functional' approach which may appear to leave out the industrial designer, at least in the minds of those who have regarded his work as being related to the more superficial aspects of machine design. Although the industrial designer may have

1 Interactions between man and machine fall into the three principal groups shown. The machine designer must be aware of and meet these conditions. In addition, he has to appreciate the relationship of co-workers which may also influence his design. 800-ton forging press by Davy United Engineering Co Ltd. Photograph courtesy Compressed Air and Hydraulics.

* W. H. Mayall, *Centre Lathes*, DESIGN 131/49-53; *Vertical Milling Machines*, DESIGN 142/58-63.

ENVIRONMENTAL INFLUENCES

ventilation

temperature

clearance

machine size

WORK SPACE FACTORS

safety

lighting

noise

MAN-MACHINE CONTROL UNIT

location of tools

space to move

factory layout



unwittingly helped to foster this view the truth is otherwise for it is also the industrial designer's objective to project his talents towards the same goal of productive efficiency.

Since the prime aim of machinery is to increase the value of the material it manipulates, then the industrial designer must first do all that he can to assist in achieving this aim. The extent of his achievement will, of course, be conditioned by manufacturing techniques and cost as is the engineering designer's. But whereas the engineer's contribution may come from specific technical developments, the industrial designer may be applying more general and perhaps less definitely provable concepts, especially since he is concerned primarily with human values. Nevertheless such a difference does not weaken this first design principle. In brief, form, texture and colour, the traditional media of the industrial designer, must be made to serve this functional purpose of efficiency in operation.

Creating an analytical technique

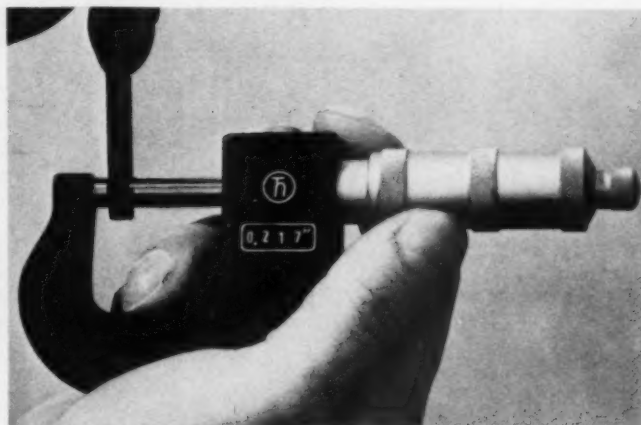
How, in general terms, can the industrial designer set about developing this principle? Clearly, if he can create an analytical technique which will apply to most classes of equipment he can establish a basis for the necessary analyses which precede his final synthesis. Further, if this technique is not simply analogous to, but truly representative of function, there is less chance of errors of judgment. Finally if the technique helps in the orderly classification of the design factors involved it can become a working tool as well as a preliminary guide.

Factors such as those shown in diagram 1 can be considered in three main groups. Moving from the extremities towards man and machine there come first of all the *environmental influences* such as heating, lighting, noise and other people. Secondly, there are *work-space factors* which, broadly speaking, determine the degree of movement allowed to the operator, possibly influenced, for example, by the proximity of other equipment. Finally there is the direct or intimate *man-machine relationship* – all those actions taken by man and machine in effecting the production process. All of these groups to some extent overlap.

Environmental influences

In general, environmental influences can be regarded as affecting the efficiency of the man in his relation to the machine. With the majority of manufacturing equipment the designer has to assume 'normal' conditions. He cannot be responsible for inefficient lighting or for noisy plant nearby. Nevertheless he must be aware of such conditions and be prepared for them. Where abnormal environmental circumstances may be present, as for instance in mining equipment, environmental factors become of great importance. To make a preliminary list of these influences upon the direct man-machine relationship is therefore always worthwhile.

2 Skills acquired in using machines and equipment may tend to inhibit the introduction of new methods even though they are simpler to use. Reading a micrometer scale can cause difficulties which could be overcome by a digital reading system, as shown in this German design by Thielicke & Co. However a British manufacturer's comment was that such a micrometer would be "only for unskilled operators".



Work-space factors

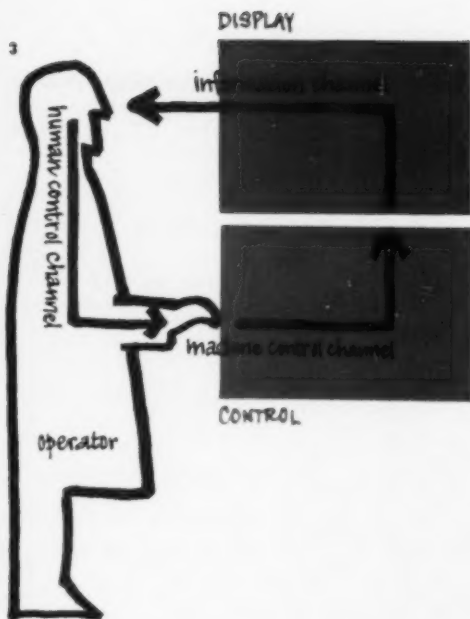
There are two broad categories involved in the work-space. Firstly, there are those factors outside the designer's control which are bound up with the location of the machine and possible interferences with the operator caused by such items as adjacent machines, storage bins of finished and future work, etc. Secondly, there are the larger aspects of the machine itself, under the designer's control, which influence the position, reach and range of movement of the operator. Both these aspects will have a considerable influence upon the operator's intimate control of the machine itself. Therefore, in considering the inter-action between man and machine, the designer cannot afford to overlook work-space factors.

Man-machine relationship

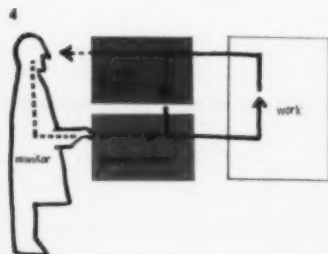
Illustration 3 defines in diagrammatic form the elements of the man-machine relationship involved in the operation of any machine. As far as the man is concerned, the machine has two important regions: the *display* areas, often the workpiece itself and its vicinity, from which he gets information for making his decisions; and the *control* areas, through which he tells the machine what to do. The link between these areas and the operator forms a closed circuit – the now familiar cybernetic concept of the *control loop*.

The control loop is the basic concept upon which the designer can build his analyses. As shown in the diagram, 4, the loop has been drawn through the operator's eyes for it is the visual sense which is used to the greatest extent. Feedback of information may also come, of course, through other senses so that other links, 5, must also be borne in mind. Of course display and control areas are not always located so neatly as the diagram suggests. Illustrations 6, 7, and 8 show different types of machinery to indicate this point. The basic concept is present in every case however.

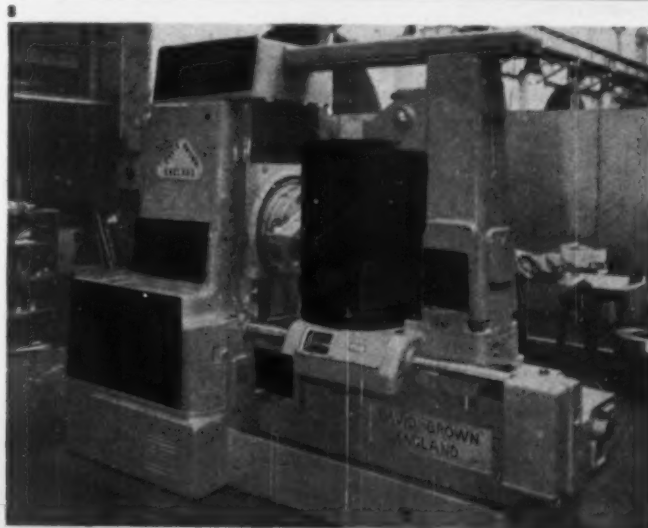
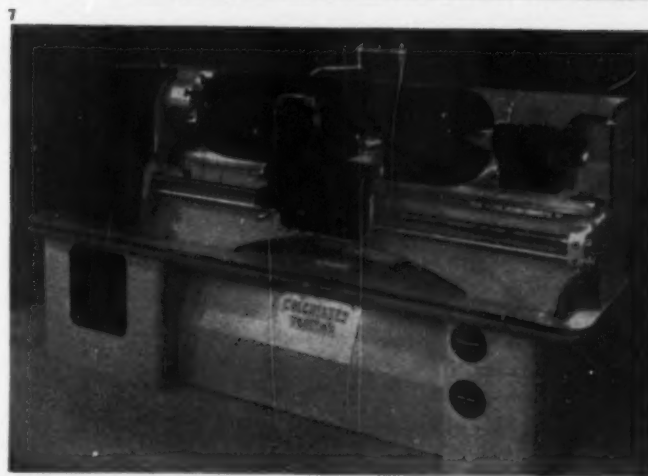
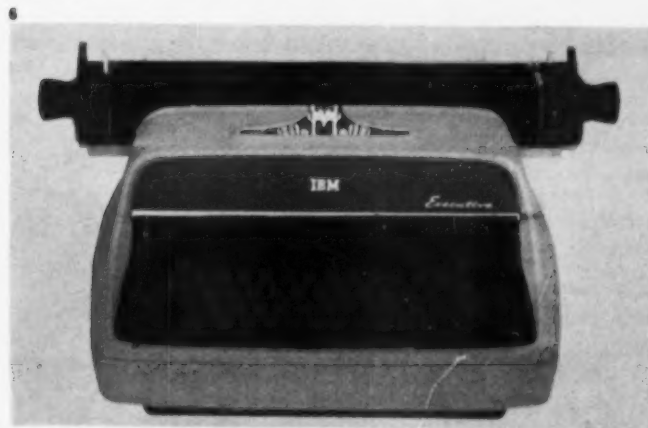
This control loop concept emphasizes those factors which are important in any closed loop control system containing human operators. The communication channels must be short and free of



3, 4, 5 Man and machine are connected by a closed loop system. Man perceives the state of work through the information channel (visual in this diagram), and makes appropriate actions through his own and machine control channels in order to effect work processes. In automated systems this task is accomplished by the machine control system, 4. Man then becomes a *monitor* rather than an *operator* and he will generally perceive a representation of the work process on a *remote display*. The man-machine closed loop analysis does not apply to the man at work in this situation. In addition to the visual channel, other information channels provide data to guide man's actions, 5.



6, 7, 8 Primary display regions (in red) and control regions (in blue) located on typical machines. It is evident that the larger a machine becomes the more widely scattered are the operating areas. Consequently greater attention must be given to the analysis and design of these areas than is necessary in a smaller machine.



9 GENERAL TASK ANALYSIS

| Sections of job | Display area | Man | | Control area |
|--|--|-------------------------------|------------------------|---|
| | | Primary input | Primary output | |
| PRELIMINARIES | | | | |
| Receive drawings and instructions | Foreman | Ears | Feet | Stores |
| Get materials and tools | Drawings | Eyes | Hands Voice | |
| Mark off and punch workpiece | Drawing material, rule, scribe, punch | Eyes | Hands | Rule, scribe, punch, hammer |
| MAN-MACHINE TASK | | | | |
| Mount workpiece | Workpiece, machine table, clamps | Eyes | Hands | Table, clamps |
| Mount drill | Drill, chuck, chuck key | Eyes Hands | Hands | Chuck, chuck key |
| Set drill depth | Drawing, drill, depth indicator | Eyes | Hands | Depth stop |
| Set drill speed | Speed tables or memory, Pulleys and belt or gearchange | Eyes Internal (memory) | Hands | Belt or gearchange |
| Centre workpiece | Workpiece, drill tip | Eyes | Hands | Table, clamps |
| ▶ Drill | On-off switch, operating lever, workpiece, drill tip | Eyes Ears Hands Nose | Hands | On-off switch, operating lever ▶ |
| Check hole depth | Drawing, depth gauge | Eyes | Hands | Depth gauge |
| Dismount drill | Drill, chuck, chuck key | Eyes Hands | Hands | Chuck, chuck key |
| Deburr hole edge (Mount run, dismount burr) | Burr, chuck, chuck key, on-off switch, operating lever, workpiece, burr tip | Eyes Hands Ears | Hands | Chuck, chuck key, on-off switch, operating lever |
| Dismount workpiece | Workpiece, table, clamps | Eyes | Hands | Table, clamps |
| Check hole position | Drawing, workpiece, rule | Eyes | Hands | Workpiece, rule |
| Clear and clean drill machine | Machine table, bench | Eyes | Hands | Table, bench, brush, etc. |
| FINISHING OFF | | | | |
| Deliver product to foreman | Workpiece, tools | Eyes | Hands Feet Voice | Foreman, stores |
| Return tools, etc. | | | | |

interference. 'Signal' strength must be sufficient for recognition and interpretation. Time delays are liable to cause oscillatory control conditions. In visual terms, for example, we know directly that features to be looked at must be located where they can be seen with least effort; that 'leading the eye' on the one hand or minimising extraneous distractions on the other keeps the communication channel clear; that readability is important and that delay caused in seeking information is going to encourage unstable control conditions. While some of these points may seem obvious, there are plenty of examples to prove that they have not been attended to. By working with this elementary control loop concept in mind, such requirements would certainly be more readily appreciated.

Applying the technique

In handling a new problem the analysis should move step by step, down into more detail through the three areas outlined above.

After clearly defining the purpose and functions of the machine, the designer should begin by learning as much as possible about the likely general environments within which the proposed man-machine combination will have to work. This is usually a most difficult area about which to obtain any solid information, and only by continually questioning and asking for 'best guesses' can any adequate view be obtained.

Next, the designer must attempt some rough sketches of the sort of work-space likely to surround the machine. In certain cases it

9 and 10 General task analysis of bench drill operating requirements to show use of closed loop concept in assessing man-machine elements involved. While the designer will be asking questions for each main stage of the man-machine task he may overlook certain points unless he makes a more detailed analysis as for example in the case of *Drill, 10*. It will be seen from the questions which he may put to himself in this detailed analysis that work - space and environmental factors are relevant.

Information flow sequence prepared by B. Shackel

10 DETAILED BREAKDOWN OF ONE OF THE JOB SECTIONS (DRILL) INTO AN 'INFORMATION' FLOW CHART

State at start: drill mounted and depth set; drill speed set; workpiece mounted, centred and clamped

Flow sequence



Notes of questions to be checked as design progresses

- Where will the drawing be?
- Can operator easily see and measure drill size, depth setting and machine speed?
- Are guards *really* easy to put on? Check with safety officers?
- Which hand? Easy to reach? Emergency off even easier?
- Which hand? Where is lubricant stored?
- Which hand? Easy to do? Position comfortable? Control good?
- Gear ratio, etc - refer to ergonomic data?
- Lighting good enough? Need light on the machine?
- Lighting good enough?
- Is position of operator, workpiece, etc, such that this information will be received by operator easily and quickly?

Depth stop securely lockable? No risk of crashing through it?

Is this very easy to do (for safety reasons)?

Control loop concept

may even be essential for him to specify in his final design that certain floor area clearances or working heights are obligatory for the machine, on installation. The other aspect of work-space factors, how the general machine shape influences the operator's movements, will of course be under his own control. He should, however, analyse whether standing or seated posture is more appropriate for the machine task envisaged, and design the height, reach, size, etc, of the machine accordingly to fit the operator's position.

Finally, the control loop concept is applied to the man-machine relationship. A technique may be adopted along the lines shown in **9**. The main sections of the operational task are first listed in sequence together with the human and machine areas involved. Then each main section is analysed to give a step by step diagram of every detail of the process. An example of one section analysed in this way is shown in **10**. Such an analysis (in this case on a simple bench drill) underlines the essential elements in each operating sequence and indicates their relationship. By moving progressively through the operating sequence an indication of the amount of human action needed to effect control is also obtained. Analyses of this type covering installation and servicing should also be made. By developing his approach step by step in the way suggested above, the designer will then have available a rational analytical basis to begin the task of integration from which his final design will emerge. When synthesising such analyses, it will be necessary for the designer to step back continually from his control loop studies to the work-space stage to achieve good integration between the requirements of both areas. Moreover, his analyses will act as helpful checklists to ensure a balanced decision when making those design compromises which will inevitably arise.

Pointers for the series

Perhaps the biggest advantage of using this control loop concept as a basis for approach is that it constantly points out the inter-relationship of man, control and display, whether the latter is the work itself or a visual representation of the work. One danger in applying ergonomic data straight from the textbooks is that it may have been derived under somewhat different conditions than those being dealt with. The loop concept causes the designer to pause a while and assess whether such data may not require interpretation to produce the best results in the actual control circuit under consideration.

Subsequent articles in this series will examine a representative range of metalworking machinery. Different aspects within this analytical approach will be examined in each article so that equivalent conditions are illustrated in a number of machine tools which perform different duties; it will be shown how human factors can unify the designer's approach to quite different types of machines.

Towards the end of the series the complete man-machine control loop concept will be reconsidered and related to the environmental and work-space influences on it. In this way it will be possible to show that the concept and the analytical technique (of which it is an integral part) can be of general usage while also acting as a constant reminder that the industrial designer's aim in dealing with production equipment is first to make it productive.

TWO COURSES FOR STUDENTS

With the disappearance of the National Diploma in Design in 1963 and the subsequent emergence of the Diploma in Art and Design as the main design qualification in this country, design training turns from a perennial controversy into an immediate problem. The recommendations contained in the first report of the National Advisory Council on Art Education (DESIGN 146/67) provide a firm basis for constructive thinking on the types of training course that must be developed before the new diploma is introduced. In particular the higher academic standards and increased age of entry recommended will mean that sights in design education can be set considerably higher than is practicable now.

However, decisions affecting the pre-diploma course as well as training in industrial design (engineering) were deferred by the advisory committee until a later report. It is appropriate, therefore, that both these aspects of design training should be considered in the two proposed courses put forward here. Though published together, they were prepared and submitted independently and do not necessarily reflect the views of DESIGN.

The need for a free exchange of ideas on these matters is particularly important at this time of preparation for a new educational programme. By the same token readers' views on the two courses will be welcomed.

A BASIC COURSE IN INDUSTRIAL DESIGN

NORBERT DUTTON

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Introduction

The purpose of this basic course is twofold. Primarily it is intended to produce a mentality capable of solving problems in design. But it aims also to provide the student with a map of the whole field of design at the outset of his training. This field is so large that he will inevitably specialise, sooner or later, in some particular section of it; and once specialised instruction has begun, there is no time and no further opportunity for the broadly-based general knowledge with which he ought to be equipped at the beginning.

Design is a single discipline, which can be taught *in principle* without reference to its particular applications. Almost all designers approach any problem in much the same way, whatever the problem. This fundamental approach can be taught, and ought to provide the groundwork on which all specialised training is based. This conception is directly opposed to the traditional method of the art schools, whereby the student is introduced to problems in design through the study of some particular craft or material or process. On the other hand, it is in harmony with every other kind of vocational training, in which it is a commonplace that specialisation comes last, and must be built on a solid foundation of general knowledge and competence. It agrees too with the findings of the National

Advisory Council on Art Education, which urges that any subject selected for specialisation should be studied in a broad context.

Every student ought to be given at least an introduction to each major branch of design. Thereafter, he will embark on his chosen specialisation with an adequate knowledge of the available alternatives, and so will not be likely to change his mind about it later on. Moreover, he will not be blind to related fields of design, as so many architects and engineering designers today, for example, are blind to graphic art and typography. If each of the subjects included in this proposed syllabus is effectively synthesised, its fundamentals may be grasped quickly. A systematic approach to colour, for example, can be imparted in the course of an hour's lecture. (Proficiency in the use of colour requires practice, and practice takes time; but proficiency is not the objective of this course. Its objective is knowledge.)

It may be objected that to gain even a general idea of every major branch of design entails the assimilation of a vast amount of technical information. But this difficulty is usually exaggerated. The essential purpose of education is not to cram the student with information, but to teach him how to obtain it for himself. Any attempt to equip a student

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Two courses for students

with all the technical knowledge he will need in the course of his career would be ludicrous; there are no limits to it, and he will never stop learning. He will learn partly by experiment, partly by consulting reference material, and partly through collaborating with technicians. To the business of acquiring information there is a recognisable 'technique'; and this can be taught.

A certain amount of basic understanding is naturally a pre-requisite. To learn from other specialists one needs at least a sufficient grasp of their language to be able to communicate. But this too can be taught *in principle*. Most processes of quantity production have a great deal in common, and these basic principles are not difficult to impart or to understand. The difficulty arises when we attempt to impart *proficiency* at the same time. For a basic course, proficiency in technical disciplines would be absurdly out of place – proficiency is a matter for the specialist. But an introduction to the principal methods of reproduction and manufacture will equip the student with a basic understanding of industrial techniques.

Syllabus

Draughtsmanship and planning

The practice of design requires the ability to draw and the ability to plan. Planning is almost a synonym for designing, as defined by the *Concise Oxford Dictionary*: to design, it says, is to formulate a plan, in the mind or on paper, etc, as a pattern. The student should learn to recognise pattern, not only in drawing but in music and language and mathematics, as a product of design, and to approach it with a logical mind. He must learn to think as well as to feel.

Draughtsmanship is the language of design, the medium in which the designer transmits his intentions to others, including those who will carry them out. More than this, it is the actual vehicle of thought – the designer 'thinks on paper', where his problems are both formulated and solved. Anyone can learn to draw, just as anyone can learn to write; drawing is simply a direct visual description that dispenses with words and was used by primitive man long before the invention of alphabets. There are, however, several kinds of drawing.

Perspective drawing records what the eye sees. Engineering drawing describes what cannot be seen: for example, the shaping of material by a sequence of operations. Architectural drawing describes an object as seen from three separate viewpoints, from the front, from the side and from above. A sectional drawing describes what could be seen only by removing a slice from the object portrayed. Each method is appropriate to a different purpose. Every designer should be acquainted with them all, at least to the extent of being able to read a simple drawing in any medium. But proficiency in drawing is not of equal importance in all branches of design.

It is important to the graphic artist because his drawing is an *end product*, intended for facsimile reproduction. In the design of three dimensional articles, in architecture and in typography, the end product is not a drawing but an artefact, to be made probably by someone else, for which the drawing is simply a specification. In the decorative arts a sense of pattern is the essential thing; drawing is merely its delineation. (Many patterns can be evolved without resort to drawing at all.)

Graphic reproduction

Every student should thoroughly understand the principal methods by which drawings are reproduced, since the reproduction process determines the way in which a drawing must be prepared. The simplest method is that of 'drawing-office prints', which are made photographically

from an ink or pencil tracing (and for which the BSI standard sizes and method of folding should be adopted). Other short-run methods easily taught are printing by silk screen and linocuts, the latter being a practical introduction to letterpress and half-tone work. Similarly, the old-fashioned 'jellygraph' provides an introduction to lithography, and etching or dry-point to gravure. Practical experience of these methods can be provided with a minimum of equipment, while drawing-office prints are readily obtainable. The object of such experience is not to acquire skill in drawing, but to acquire a grasp of printers' requirements.

Measurement and scale

There are many and various sets of measurements with which the student will have to contend: those, for example, of drawing papers, printing papers, photographic prints, type sizes, book formats, half-tone screens, and raw materials of every kind. Certain movements towards a simplification of sizes are under way. The adoption of the International Standard Paper Sizes for printing has been endorsed by the British Standards Institution, and the Modular Society is campaigning for co-ordination in the sizes of building materials. Since these movements are expected to make progress the student should be aware of them.

Much designing is done to scale, the drawing being either larger or smaller than the finished job. Enlargement (as in graphic work) is usually done to some arbitrary and convenient measure, while small-scale drawing (as for constructional work) is facilitated by the use of a scale rule. There is also a simple method of increasing and reducing measurements proportionately by the construction of rectangles on a common diagonal, and this should be taught.

Theories of proportion

Since design consists in the construction of ordered patterns, it follows that a study of proportion is of basic importance and is universal in its application. The component parts of a pattern must bear some dimensional relationship both to one another and to the pattern as a whole. To take a simple example: on a printed page the height and width of the sheet, the type area and its margins, are all interrelated, as are the height and width of a building, and the sizes of every component such as doors, walls, etc. To establish a dimensional scheme by which satisfactory relationships can be achieved is the object of theories of proportion.

The elementary exercise is to divide a straight line into two unequal parts. A subtle and flexible ratio is found in the so-called 'golden section', the dimensional *rationale* of the Parthenon – the smaller part is to the greater as the greater is to the whole. This division is effected quite simply with a set square and compass – two necessary instruments for the study of proportion. This principle of extreme and mean proportion can of course be applied equally to the construction and subdivision of rectangles and of shapes contained within them, and provides scope for almost inexhaustible analysis and experiment. There exist also other systems of proportion which should be studied.

It need hardly be said that no theory of proportion will produce creative design, just as no amount of knowledge will produce a creative designer. Such theories are simply a tool, like a scale rule or a colour system; something to be mastered at the outset and then applied unconsciously, not as a guide but as a regulator.

Typography

The study of typography provides a useful introduction to design processes. The typographic layout is an exact specification; layout and proof must be in all major respects identical. Metal type is an intractable material, for although it can be stretched (by letter spacing) it cannot be squeezed, and any inaccuracies in the layout will be instantly revealed by comparing it with the proof. It is also an exercise in the visual organisa-

tion of material. The material is 'given', just as the terms of reference of any design problem are given and cannot be altered to suit the requirements of a layout. The layout must accommodate itself to the matter, of which it is simply a statement, a medium of expression. Thus the study of typography is a training in discipline, organisation and, not least important, humility.

Colour theory

A systematic approach to colour can be put into a nutshell: every colour exhibits the three properties of hue, value and chroma; and every colour scheme is a manipulation, whether conscious or not, of these properties. A colour *system* (eg, Munsell) is an arrangement of colours according to these properties. A colour *standard* is simply a selection of colours adopted and standardised for some particular purpose; their selection may or may not be systematic. A systematic approach is indispensable to a proper understanding of colour. It is the basic grammar without which we cannot aspire to the production of prose, let alone of poetry. And it can be mastered in a quarter of an hour. The various theories of colour harmony are not so readily assimilated; but this, fortunately, does not matter, since their value is dubious and we are all entitled to develop our own. But every theory is based on a systematic approach to the subject.

Ergonomics

This comparatively recent field of study concerns human behaviour under working conditions, and hence, the fitting of the job, the machinery and the environment to the man. It falls into three sections. One part is *anthropometric*: it deals with physical measurements, to determine the optimum height and size of working surfaces, the position of hand and foot controls, the shape and height of seating, and so on. Another part is *anatomical and physiological*, and deals with such things as body position, posture, movement and energy expenditure. The third part is *psychological*, and deals with how the operator receives, processes and acts upon information. It studies, for instance, visual and mental fatigue, among control room operators. Some of the basic principles of ergonomics are already applied widely, though unconsciously and haphazardly, in many fields of design.

In conclusion

To sum up: it is intended to provide the student with his basic professional equipment, to teach him how to collaborate with other technicians, and how to obtain information and add to his knowledge. This course could be completed in a single year; and with such a foundation, subsequent specialisation could be embarked on with confidence.

AN ADVANCED ART SCHOOL COURSE IN INDUSTRIAL DESIGN (ENGINEERING)

J. CHRISTOPHER JONES

J. Christopher Jones was assistant industrial officer at the CoID from 1950-51, when he worked on the Festival of Britain projects. Since that time, he has been in the AEI (Manchester) Ltd Industrial Design Office, and is at present in charge of the Industrial Design Ergonomics Laboratory, where he has also been running a course on industrial design for the last seven years. In addition, Mr Jones works part time at the Regional College of

Art in Manchester, where he was concerned with the student design study of cutlery featured in DESIGN 124/49-52. Since last September, he has been supervising the user design research for the newly formed School of Advanced Studies. Mr Jones, a regular contributor to DESIGN during recent years, was the author of an important series of articles, Automation and Design, published by DESIGN during 1957.

Introduction

It is clear that both the practice and the teaching of industrial design are in a state of rapid evolution and change. Industrial design practice is being extended in many directions beyond the area of applied visual art. Industrial design teaching is beginning to include many scientific, technical and humanistic studies; and its whole basis, in this country, is at present under review by Government committee.

In the confusions and controversies aroused by these many changes away from the craft approach towards something more modern and more scientific a few clear trends are emerging.

1 The industrial designer's role is being extended from that of improving appearance and increasing sales appeal towards the co-ordination of many kinds of aesthetic, technical, ergonomic and market requirements within an organised and systematic design method.

2 Future designers will need considerable scientific, technical and general knowledge to fulfil this role.

3 Many conflicts, uncertainties and difficulties arise in fitting these new methods into the existing artistic and craft-based approach which is appropriate to industrial design as now practised.

It seems to the author that the situation demands unusually high entry standards to the type of design course proposed and the widening of the syllabus to include both the newer and more theoretical sciences and the existing practices of applied arts. By this dual approach students will be

both equipped for the traditional forms of industrial design that they will be expected to carry out in their first jobs, and be able to adapt to, and introduce, the newer methods as these come into use at a later stage in their careers. The following outline of such an advanced course is put forward for consideration at the present moment of decision in industrial design education.

Purpose of course

The course is intended to do two things:

1 To enable students to take an immediate and useful part in the work of a design office. For this they are taught:

- (a) Awareness and perception of current fashions and trends in design and the ability to derive shapes and forms that accurately reflect the nature of the design problem and express the feeling of our own time.
- (b) Skill in engineering drawing, illustrating, presentation and writing.
- (c) Appreciation of technical and commercial requirements.

These subjects and skills are taught to a high level of competence (with no concessions to traditional art-school untidiness) so as to guarantee starting salaries sufficient to attract students of high calibre.

2 To enable students to adapt to modern trends that may arise after they have left college and to fit them to use the scientific knowledge and systematic methods that can be expected to transform the nature and

Two courses for students

importance of industrial design during the middle and later parts of their professional careers. For this they are taught:

- (a) Communication and information.
- (b) Aesthetics, human science, contemporary thought.
- (c) Technology, science and economics.

This second area of knowledge can be the means of turning the largely craft-based industrial design courses of today into courses of a much higher academic standard. It does this by the only feasible method – that of introducing rigorous *theoretical knowledge* of a kind that will become essential to successful application but which cannot be learnt *on the job*. This enables the teaching establishment to concentrate on what it alone can provide and gives students the immense advantage of fundamental knowledge that will give them a grasp of any situation which they may afterwards encounter.

The complete course is intended for students who have completed a sixth form education. Students who already have art school diplomas, engineering degrees or diplomas, human science degrees, or arts degrees could omit much of the teaching in their own subjects.

Syllabus

Section 1: communication and information

A Presentation and communication

THEORY

Descriptive communication theory, with emphasis on the effect on the recipient.

PRACTICE

Illustration; freehand drawing; engineering drawing; photography; typewriting; tape recording and editing; model making and prototype making.

B Information and methods

THEORY

Systematic design methods; language; logic; numerical methods; graphs.

PRACTICE

Writing letters and reports; using calculators, slide rules and punched cards; charts and diagrams; analysis of design problems.

Section 2: human behaviour

A Aesthetics and perception

THEORY

Art appreciation; perception theory; art theory.

PRACTICE

Free experiments with abstract forms and colours; perception experiments; transformations of scale and media; analytical drawing.

B Human science

THEORY

Anthropology, sociology, physiology and psychology; the interactions of people, utensils and environments; methods of observation, recording and analysis.

PRACTICE

Relating equipment sizes to body sizes; observation of user behaviour; experiments in user behaviour with old and new designs.

C Contemporary art and ideas

THEORY

History of art and contemporary art; history of ideas and contemporary ideas.

PRACTICE

Essays, visits and reports.

Section 3: Industrial practice

A Technology and natural science

THEORY

Manual, mechanised and automatic processes; materials, structures, unit construction; quantity, accuracy and costs.

PRACTICE

Workshop practice in machining, welding, pressing, fitting, finishing and inspection of metals, plastics and timber; visits and reports.

B Economics and existing practice

THEORY

Economics and demand; selling, rental, obsolescence, depreciation; acceptance and rejection of innovation; boundaries between logical and intuitive methods and between new and existing designs.

PRACTICE

Market research; visits and reports.

Section 4: design practice

A Professional practice

THEORY

Professional codes of practice; organisation of work; fees, etc.

PRACTICE

Individual and group projects leading to the completion of designs to a high level of competence. Also the ability to re-interpret an out-dated design in the light of changes in user requirements, new materials and processes, and changes in visual appreciation among consumers.

Staff

As the proposed syllabus is intended to introduce new teaching of a high intellectual standard the grading of teaching posts should be raised to that of university and college of advanced technology standard. The obvious difficulty of doing this in colleges where other subjects may continue to be taught at a lower grade might be overcome by teaching industrial design as a post graduate subject.

An essential feature of so wide a syllabus would be considerable dependence on visiting lecturers from other institutions. A large part of the budget should be made available for this so that fees and travelling expenses could be met for those who are authorities in their subjects.

Given plenty of visiting lecturers, such a course could be run by a small local staff covering the following subjects only:

Design practice

Illustration and photography

Model and prototype making

Information

Facilities

Facilities for workshop practice should be sought in a technical college. The minimum facilities to be available in the college might be:

Drawing office with photographic equipment.

Model shop with woodworking, welding, fitting, plaster, glass fibre and spraying equipment.

Information office with a budget for publications and journals in a wide range of technical, scientific, and general subjects; typewriting, copying and offset printing facilities; adding machine; tape recorder; slide and cine projectors.

Laboratory – an insulated room with recording equipment and a budget for making special apparatus.

Research

The effectiveness of such a course, and the standard of teacher attracted to it, would be greatly enhanced by the presence of research facilities for both staff and research students.

modernising ritish ransport no.5

Stations and station equipment

This article is the fifth in a series dealing with various aspects of the British Transport Commission's modernisation programme. The author discusses the new stations and station improvement schemes that have been initiated under the modernisation plan, and describes the wide range of equipment designed for this new environment.

ARCHIE McNAB

The traditional character of Britain's railways has been created as much by railway architecture as by locomotives, and both were originally expressive of a purely functional approach to the problems of design, based on new materials and new techniques. Over a period of nearly 150 years the railway tradition has been carefully nurtured until it seems that the system is now regarded as an expensive white elephant or tolerated with the sentimental affection of preservationists. Such romantic ideas, deriving from an honest respect for the achievements of the Victorian age, tend to obscure the essential function of, for example, the double arch at King's Cross, or the iron and timber of many less notable stations. Each and every one of these, at the time of building, was the result of a revolutionary conception for a new means of communication, and there is equally a case today for the development of a machine aesthetic particular to railway architecture, and appropriate to a period when rail transport must compete on strictly functional terms with its competitors.

The 1955 modernisation plan provided the opportunity to create an architecture based on present day requirements, and, without drawing slavishly on outdated values and methods, to preserve and revitalise all that was best within the existing pattern. The plans were ambitious, and, if the task was to be carried out in a manner superior to 'make-do-and-mend', it required a closely knit team organisation without any unnecessary division of responsibility. In fact, however, after five years, the division of responsibility remains, and although it would perhaps be wrong to deprive the regions of their independence and the stimulus of competition, the present set-up inevitably produces varying standards of design.

Apart from this, station building has had to take its turn, to quote the British Transport Commission in 1960, "in the queue of

Two courses for students

importance of industrial design during the middle and later parts of their professional careers. For this they are taught:

- (a) Communication and information.
- (b) Aesthetics, human science, contemporary thought.
- (c) Technology, science and economics.

This second area of knowledge can be the means of turning the largely craft-based industrial design courses of today into courses of a much higher academic standard. It does this by the only feasible method – that of introducing rigorous *theoretical knowledge* of a kind that will become essential to successful application but which cannot be learnt *on the job*. This enables the teaching establishment to concentrate on what it alone can provide and gives students the immense advantage of fundamental knowledge that will give them a grasp of any situation which they may afterwards encounter.

The complete course is intended for students who have completed a sixth form education. Students who already have art school diplomas, engineering degrees or diplomas, human science degrees, or arts degrees could omit much of the teaching in their own subjects.

Syllabus

Section 1: communication and information

A Presentation and communication

THEORY

Descriptive communication theory, with emphasis on the effect on the recipient.

PRACTICE

Illustration; freehand drawing; engineering drawing; photography; typewriting; tape recording and editing; model making and prototype making.

B Information and methods

THEORY

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Credits

Architect to the British Transport Commission:

F. F. C. Curtis

Architect to Eastern Region: H. H. Powell

Architect to London Midland Region: W. R. Headley

Architect to North Eastern Region (until December 1960):
the late A. N. Thorpe

(from March 1961): S. Hardy

Architect to Scottish Region: J. A. Arthur

Architect to Southern Region: H. H. Pittaway

Architect to Western Region (until July 1960): the late
H. E. B. Cavanagh

(from December 1960): R. L. Moorcroft

Design Officer, BTC: George Williams

priorities well behind more urgent requirements", and it is difficult to see in physical terms what has in fact been achieved over the last five years. The BTC has already spent £600 million on modernisation, of which obviously only a relatively small proportion has been devoted to stations, both new and improved, and to station equipment. Whether or not the recent Government white paper, with its decision in effect to abandon a co-ordinated transport policy will mean cuts in the modernisation programme just when it is beginning to show results, is uncertain.

To establish a vernacular in railway architecture, it is essential that a common aim is acknowledged, for there is no place today for individual *tours de force*. Co-ordination in the design of the station shell and its contents can help to achieve this. It is a curious truism that industrial design and architecture are rarely integrated, and the division between the two is often quite arbitrary and usually unreasoning. Yet the fruits of this attitude are common in most of the railway stations which we are so anxious to see improved. Piecemeal additions, however well designed individual items may be, merely result in the hotch-potch of automatic machines, waiting room fittings, signboards, and so on, which are typical of most of the London termini. The work of the Architects' Study Group set up by BTC's Design Panel should ensure that certain standards of design for individual items of equipment are established. But ideally a station, like any other building, has to be thought of as a whole, and the shell must be inseparable from its contents – ticket machines, bookstalls and the rest.

Harlow Town station, 1–6, is the most notable contribution to this kind of thinking. Built to meet the unprecedented demand of a



New Town, Harlow was opened in July 1960, and it represents a first important step towards a new railway architecture. It is almost brutalist in its realisation, with a highly mechanical approach to the design problem; there is no nonsense here. The three 50-ft lift towers contrast with floating black canopies which give the building a horizontal emphasis to accord with the requirements of the site. There are certainly reservations which could be made about this design, such as a self-conscious pre-occupation on the part of the designers to create a building which has 'character', but to quibble is to undermine what is in fact a positive statement of purpose in the given context of railway needs. The detailed planning that has gone into the design of this station takes account of the wider problems of internal organisation, as well as the equipment required to administer the station properly. The external form is reflected in the booking hall which is consciously abstract in elevation, and straightforward in layout and circulation.

New stations are only built by British Railways if, as at Harlow, there is an unprecedented demand or where technical requirements render an existing station completely out of date. At Broxbourne and Hoddesden, 7-11, a new station was necessary to eliminate a rail traffic bottleneck. The building is rather more conventional than Harlow Town, but it shows the same consistency in design. It also represents a breakaway from the established approach to railway architecture and, whereas no attempt has been made to produce an aggressive design, the result is more than satisfactory.

The success of both stations has been marred in places by the addition of small items of equipment such as extra loudspeakers on platform canopies, fire extinguishers and other safety devices, and

by the undistinguished design of station name boards. Again there is evidence of a lack of departmental co-ordination in the fact that, while the overhead gantries carrying the electric power lines within the station limits have to some extent been designed to suit the stations themselves, there is an unfortunate divergence in the types used outside these limits. There are at least three different designs in use within short distances of the platforms.

Both Harlow and Broxbourne represent high points in station design, and show unusual quality in contrast to the exhibition architecture of Chichester, 12 and 13, which admittedly was designed earlier. Here the scale of the building, both internally and externally, suggests the influence of the grandiose tradition of railway architecture, and is quite unjustified. The design is further spoiled by some tasteless décor, particularly in the main booking hall, and a series of gimmicks in the design of details. It is obviously an improvement on its antiquated predecessor, but whatever may be said in extenuation cannot excuse what is in fact a bad design.

If Chichester epitomises the mediocrity of much British architecture, Oxford Road in Manchester, 16-21, can be considered as an exercise in the modern interpretation of the grand tradition. It is also notable as an experiment in the use of laminated timber and prefabrication. The more individual character of the building, however, places it outside what may become the main-stream of industrial architecture.

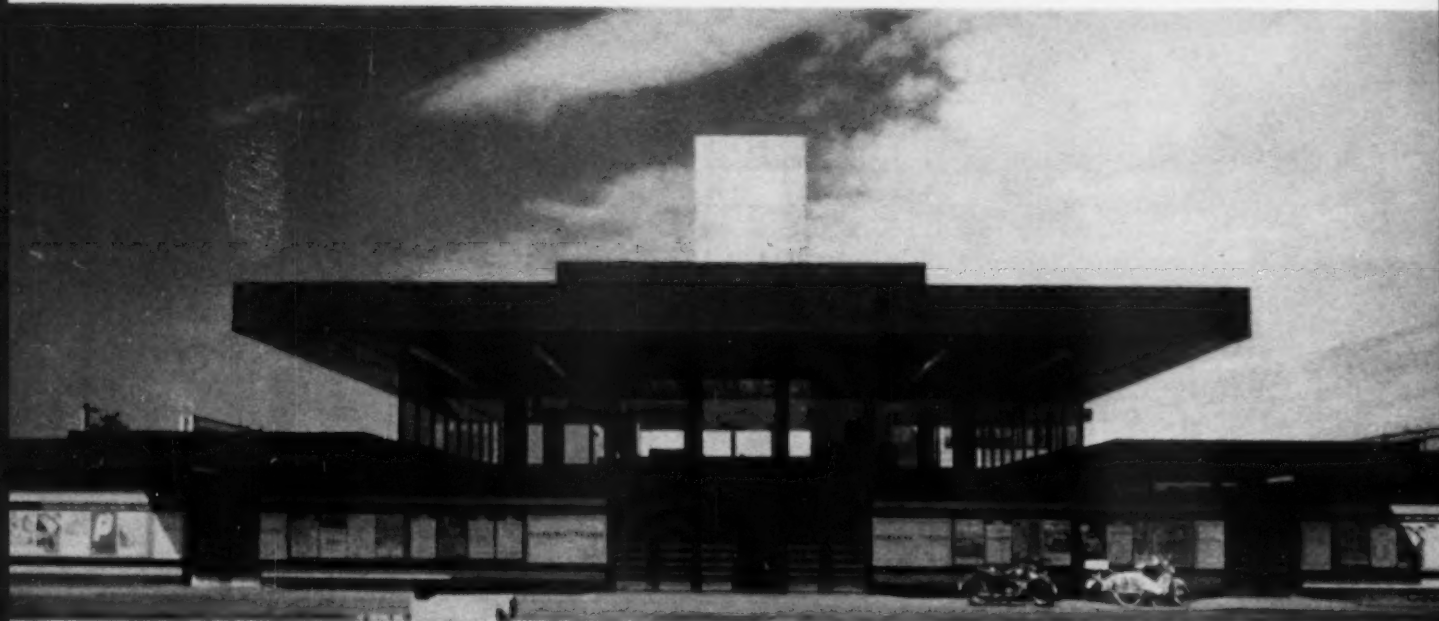
The stations briefly described here constitute, together with a few others such as Potters Bar (DESIGN 86/21-23), Sheffield Victoria, 26, and a number of stations on the Manchester-Crewe

text continued on page 63



1 and 2 Harlow Town station, Eastern Region, is a carefully integrated design which also stands up to a detailed examination. For example, even the poster displays have been carefully sited as part of the overall design.

3



3 Harlow is one of the outstanding achievements of recent railway architecture in this country; the design of the main building reflects a synthesis of materials, function and technique.

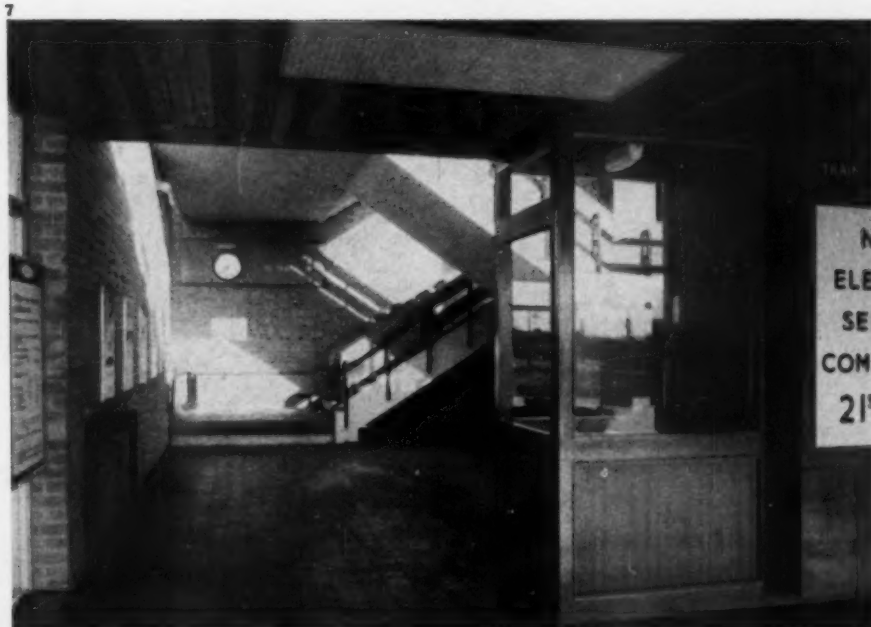
4 The organic unity of the main building is not carried through to the platforms with their confusion of lamp standards and overhead wiring (despite the fact that the gantries were designed as part of the station project). The attempt to echo the design of the exterior in the black canopied platform shelters is also not entirely successful.

5 One of the station's merits, however, is the way in which the architects have been able to maintain control over smaller items. Here the posters are well considered in conjunction with platform seating.

6 The abstract feeling of the exterior is reflected internally in the elevational treatment of the mosaic walls in the booking hall. Unfortunately, however, unnecessarily clumsy rubbing strips protect the corners of columns and walls.



7, 8 and 9 Broxbourne, Eastern Region, although more conventional, is nevertheless a simple and clearcut design, and in its detailing is often an improvement on Harlow. The grouped telephone kiosk, collector's box and train indicator, **7**, are straightforward, and the staircase, **8**, has been well handled.

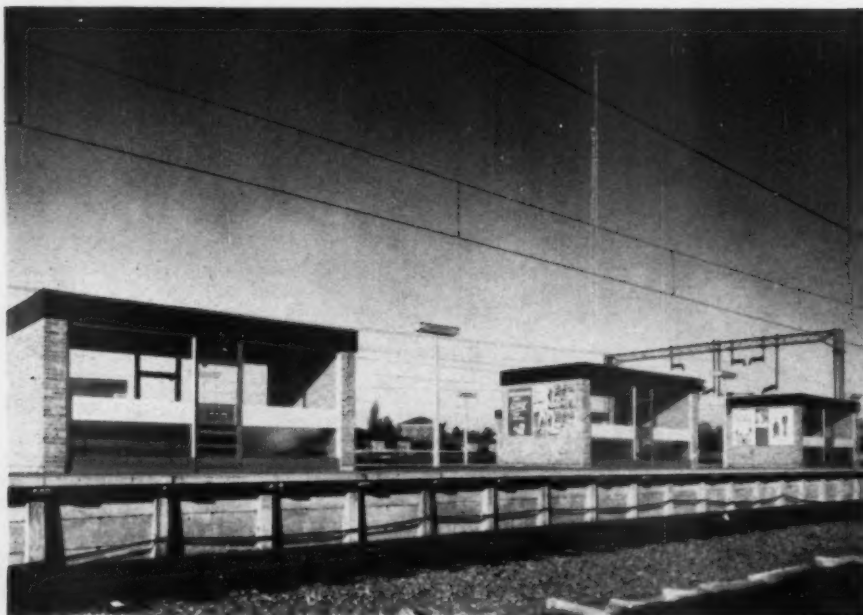




10 The handrails at Broxbourne are particularly well done; as well as being decorative they provide a good handgrip and protect the brickwork.

11 The platform shelters are carefully proportioned and more successful than those at Harlow; no attempt has been made to echo any specific design element of the main building.

Modernising British Transport



12



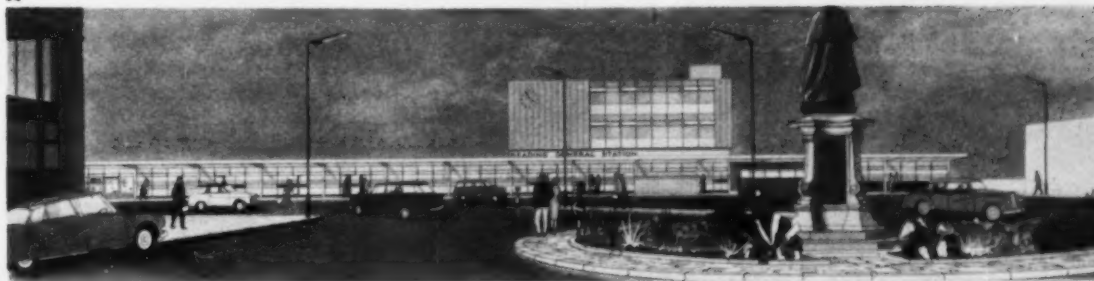
12 and 13 Chichester, Southern Region, with its self-conscious flamboyancy, reflects the worst features of the South Bank in 1951; the train indicator, **13**, does not show any real departure from the old standard – in fact the longer station names are ludicrously cramped.

13



14 and 15 Western Region's project for the new station at Reading, **14**, does not at this stage suggest that it will make any positive contribution to railway architecture. Whitland, **15**, on the other hand, although it breaks no new ground, is a satisfactory solution for a small station.

14



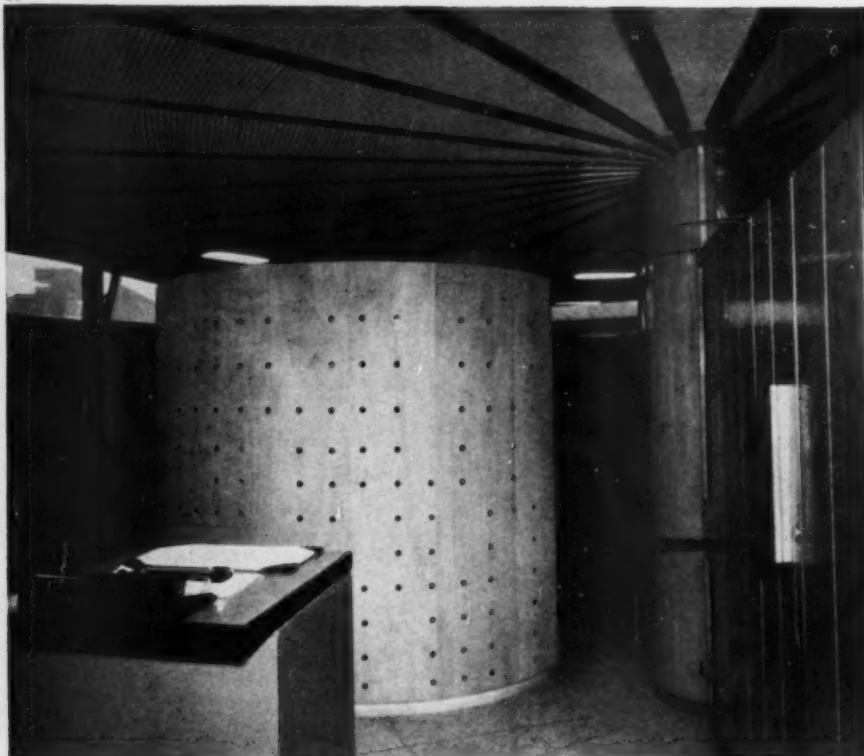
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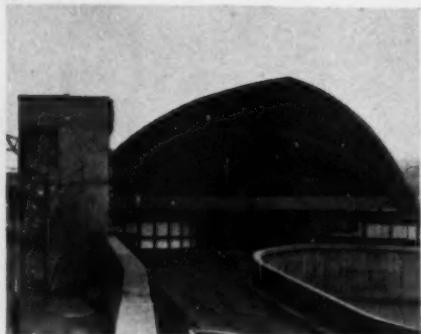
17



16 - 21 Manchester Oxford Road, London Midland Region, is specially interesting for its use of laminated timber, and for the consistent way in which the architects have related the design of

exterior and interior. 17 shows an unconventional solution for a parcels and left luggage office; the waiting room tables, 20, however, are too self-conscious to be completely successful.

18



19



20



21



22 and 23 Leytonstone, Eastern Region, sited on a viaduct, is an early example of reconstruction under the 1955 modernisation plan. It is particularly interesting for its use of prefabricated components.

22



23

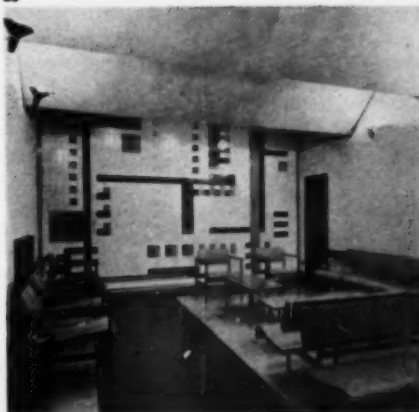


24



24 Prefabrication can make a vital contribution to railway architecture; the U D C system adopted by the Midland Region provides an economical solution to the problems of station design.

25



25 and 26 Some of the redesigned waiting and refreshment rooms use patterns indiscriminately to break up large bleak spaces. In the ladies waiting rooms at Liverpool Street, **25**, and Sheffield Victoria, **26** (both Eastern Region), the use of blown up paintings and large scale pattern is successful.

26



27, 28 and 29 New designs for individual items of equipment, such as these platform seats and litter containers show a marked improvement on nearly all that are now in use. (The platform seats are designed and manufactured in the London Midland Region workshops, and the litter bins were designed for the BTC Design Panel by David Mellor.)

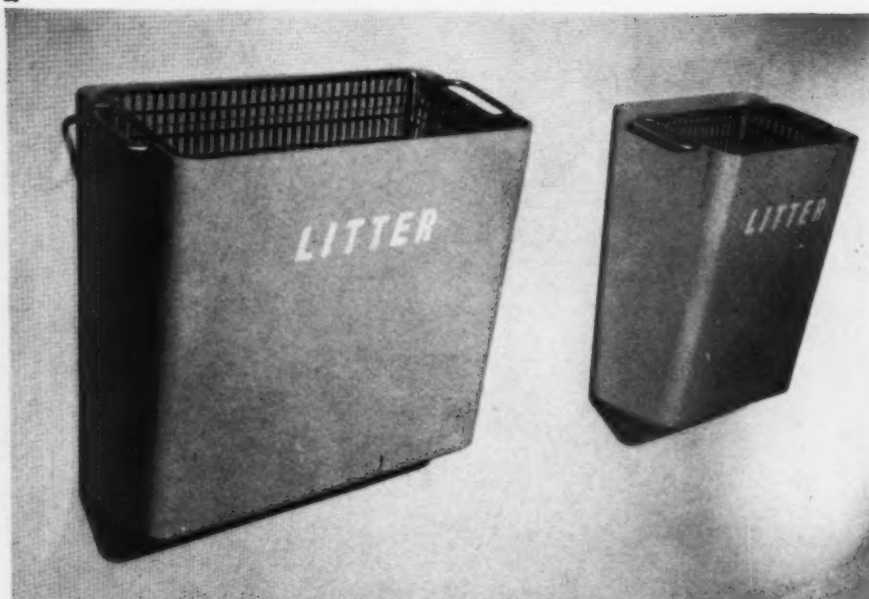
27



28



29



Gordon McLaren Associates

30 and 31 The improvement of the ticket barrier at Bradford (North Eastern Region) speaks for itself.

30



31



32 and 33 Bulky left luggage lockers, such as those installed at Paddington (Western Region), **32**, are installed in many stations. They are improved considerably when they are built in to the structure, as in Dundee (Scottish Region) **33**.

32



33



line, the beginnings of a new railway architecture. Other projects, including Reading, 14, Port Talbot, Plymouth, Barking and so on, will show whether this positive start will form the basis of a vital and continuing design theory for the railways.

Improvement schemes

Not all stations require replacement. Under the 1955 modernisation plan, minor improvements were initiated to clear up the mess left by dirt and grime and general deterioration over the years, and by indiscriminate addition to old buildings. This was not merely restricted to eliminating damp corners and revamping waiting rooms. For example, track improvements at Leytonstone, 22 and 23, and Hadley Wood necessitated either the complete rebuilding of superstructures or the addition of new buildings. But the conventional idea of a station as a museum for lovers of Victoriana is also being replaced. The principal means of destroying the illusion has been maintenance and, where new work has been done, the introduction of washable surfaces which reduce maintenance to a minimum. Getting up to date is not of course an end in itself, and improvement has to be seen as a problem which takes due account of existing buildings of merit. It would be a pity, for example, if modernisation brought about the destruction of Cannon Street, or King's Cross, or St Pancras. Whatever has been done to the area surrounding these stations is now beyond our control, but they can within their precincts be improved considerably. The difficulty is to reconcile current requirements with tradition. The architects are faced with two main problems; first, to make the best use of existing space without incurring major structural alterations, and second, to choose materials which are attractive, comfortable, and hard wearing. This calls for ingenious planning and careful attention to scale. Only harm can come of the indiscriminate insertion into the building of 'contemporary' décor and ill considered slot machines, panels of posters, etc.

The Architects' Study Group is working on a common code of practice and a recommended method for minor improvements in local stations, and British Railways has already pointed the way in a number of revamping schemes where the maximum effective improvement has been obtained at the most economical cost. At Cambridge, for example, the station has been completely repainted in new colours, and a criterion of cleanliness established as a general rule. On the whole the railway authorities avoid the mistake of treating external elevations as though they were backgrounds for internal decoration.

Station equipment

Equipment within stations, unless regarded as an integral part of the building, calls for some degree of standardisation. If this cannot be achieved with the variety of stock items normally used, then a concerted effort by the railways to improve the design of these individual items must be made. The Architects' Study Group is in fact already tackling this problem, and is collecting a stocklist of items, often originating from one region, which can be used as a catalogue by all regions (similar in a way to the CoID's 'Design Index'). This will perhaps lighten the burden on the regional offices, already responsible for anything from seats and ashtrays to

workshops, marshalling yards, goods depots, hostels, etc. Work is now proceeding on the re-design of trolleys and similar mobile equipment. A greater problem, however, lies in the design of trade equipment, such as vending machines, which have now become an essential feature of most stations. These designs are dependent on the needs and fancies of individual manufacturers and any improvement must come from this source, the manufacturers working, if possible, in liaison with the Design Panel and the Architects' Study Group.

Possibilities with prefabrication

It is surprising that within the overall programme covered by the modernisation plan, no greater development has taken place in the use of prefabricated components; the railways have used their own structural systems, and occasionally a patented system, in isolated cases. However, despite the considerable amount of research in recent years, there has been no significant exploitation of the possibilities of prefabrication, in terms either of economy by bulk purchase or of the flexibility or expediency of such systems in use. Railway building, assuming that a rail transport system will retain its value for a considerable time to come, is ideal for experiment, as J. M. Richards pointed out in *DESIGN* in 1955 (*DESIGN* 81/33), and prefabrication is particularly suitable for small units, like platform shelters and ticket collectors' boxes. Factory production of building components, based on scientific study would fulfil the needs of speedy economical construction, despite the varying site requirements of much railway building and the slight modifications required by each problem.

But the full exploitation of prefabrication can only be brought about by a long-term continuous building programme which would make bulk purchasing a realistic possibility. Despite the early development of a prefabricated system in 1947 by Sir Leslie Martin and Richard Llewellyn Davies, when the LMS railway had a programme for 300 new or reconstructed stations (only two were in fact built), progress since then has suffered from frequent interruptions of building programmes by interference from successive governments; a starvation policy shortly after nationalisation, in 1947/48, and inconsistency and mind-changing since. Prefabrication becomes nonsensical when limited to two or three isolated stations or is subject to political bargaining.

The few stations which have been built on a prefabricated system show what can be done. Sandbach, 24, and many other stations on the Manchester-Crewe line, are based on the *Unit Dry Constructional* system developed over the past four years by the Midland Region, using an aluminium structure, roof units, external wall units and internal partitions as the four main elements. This and *System C* of the Eastern Region go some way to prove that discipline and flexibility of design have a salutary effect on the final result. The advantages are not merely economic. For example, the use of components simplifies construction without obstructing rail services.

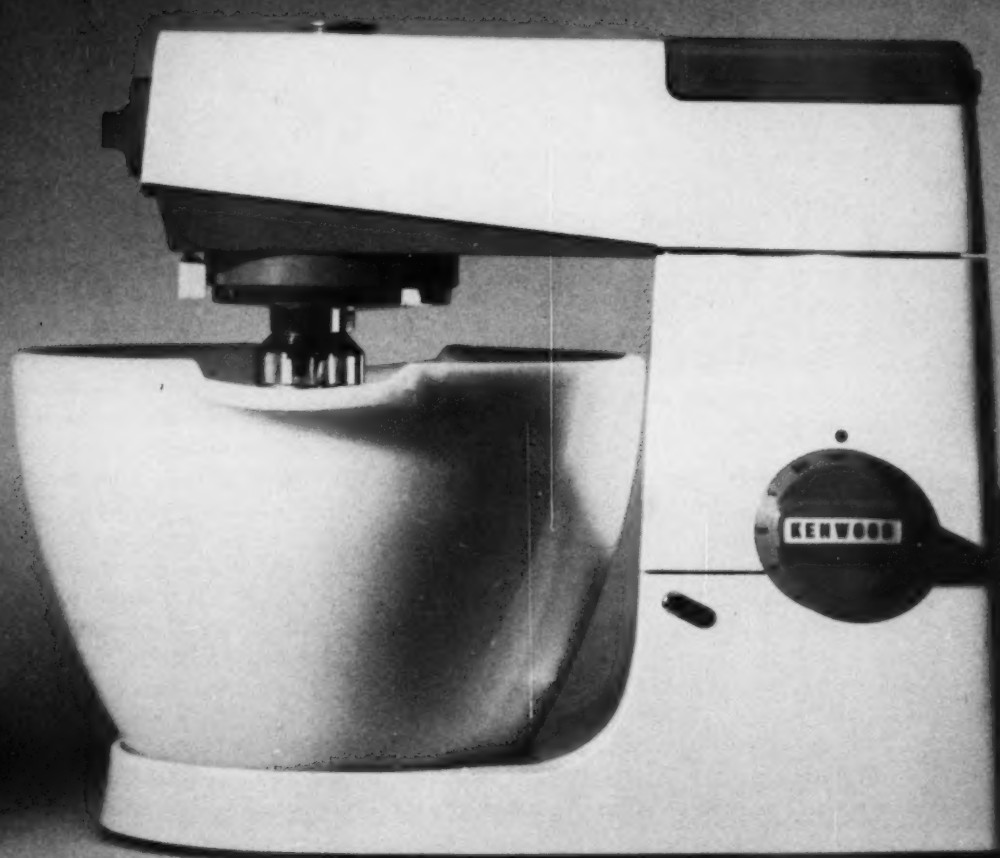
The present situation and the future building programme are largely a political responsibility and it is to be hoped that the Government will now see fit to create conditions whereby the railways could fully develop a means of construction which would go a long way towards establishing a vital new railway aesthetic.

product development no.2

DESIGN, like most journals, has some sections devoted to reports and others to comment. While the purpose of the related series under the general heading of Design Analysis is to comment on the success, or otherwise, of a product once it has been made, this present series is concerned with what happens to a product before it appears on the market. The choice of subject in both series is governed by a similar criterion – that the product should have some outstanding characteristic that makes it worth while discussing.

1

DOMESTIC
FOOD
MIXER



2 The Kenwood Chef food mixer (model A700D).



MALCOLM J. BROOKES

When a company introduces a new product to its range of equipment, the motives for so doing are not always obvious. Sometimes it results from seasonal changes in the market, or perhaps because a weakness in a previous design needs to be overcome. A competitor may produce a new concept which could be improved upon, or an implement commonly found in another country can be adapted to British needs.

As far as Kenwood Manufacturing (Woking) Ltd is concerned it was a part of a deliberate policy to create a demand in a comparatively untouched field. Some years ago, Kenneth Wood, managing director, saw a market in this country for a food mixer, not perhaps on so large a scale as on the Continent where there is a different approach to food preparation, but certainly large enough to offer considerable scope for expansion. Today there are some 10 different firms in Britain selling mixers, and the introduction of the Kenwood A701 Chef mixer, superseding the company's Chef 700 models, can be seen to stem from a comprehensive reappraisal of current market requirements.

Continental markets long dominated by European firms are now opening for Britain, and it was in this direction that Kenwood was looking. But due to statutory regulations concerning electrical requirements it was not easy for the company to sell its Chef 700 models overseas. In Scandinavia, in particular, electric powered domestic appliances must conform to a rigid code of practice which differs from the Institution of Electrical Engineers' regulations in this country (and hence the British Standards). Thus when it was decided some five years ago to expand its marketing on the Continent, as well as making the necessary alterations to the electrical side of the 700 model, 2, Kenwood set out at the same time to redesign it completely.

It was seen that new developments in materials and production techniques could result in a number of economies, and at the same time continual research was carried out to see what functional and mechanical improvements could be made to the 700 series.

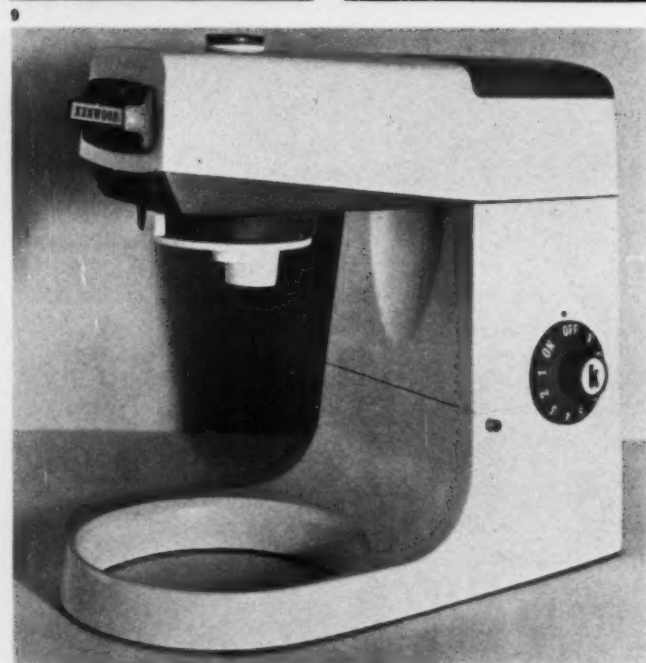
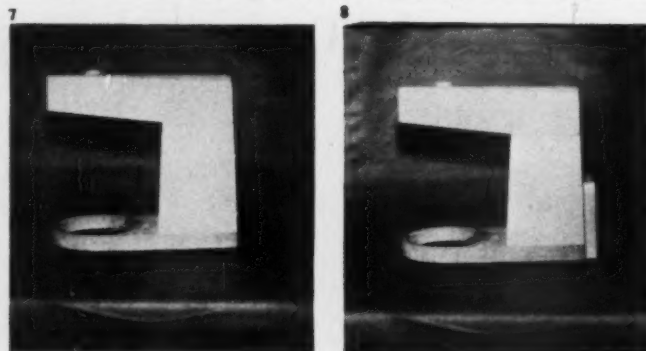
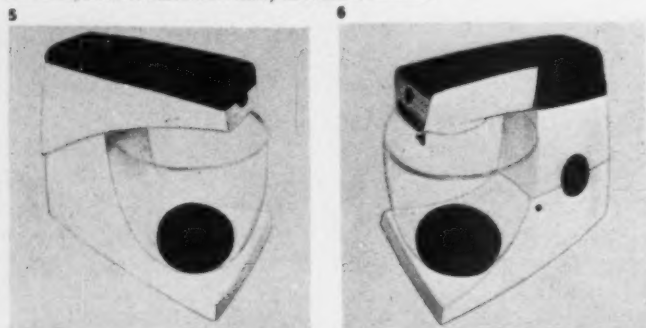
Design for international markets

Superficially it might appear that the A701, 1, is only a restyled version of the 700 model. However, research into various ways of mixing foods proved to the company that its original planetary action for the mixing device (rotation of the mixer which itself rotates not about a fixed axis but in a predetermined orbit) should be retained, and the basic principle of a motor, housed vertically in the body, driving a gearbox in the head, was agreed to be satisfactory (DESIGN 125/36-45). But the gearbox, cast in the head, 3, was no longer an economical proposition. To simplify servicing a

Domestic food mixer

5 and **6** Two early drawings by the company's staff suggesting how the *A701* might look. In these designs the inside of the body closely follows the profile of the mixing bowl.

7 and **8** Two early mock-ups made by Mr Grange. **9** A later mock-up of the food mixer. The indent in the inside of the body is necessary to allow clearance between the body and bowl. Alterations between this model and the finished product mainly concern the shape of the on/off speed control knob and the detailing of the juice extractor outlet cap on top of the cover. A bar switch was used on the final design to give: (a) better grip for the on/off switch; and (b) continuity with the shape of the slow speed outlet cover, at the front of the machine, both of which now carry the maker's name.



new design of gearbox was evolved, **4**, which could be produced as a separate, totally enclosed, grease packed sub-assembly. It is said that this is quieter in operation and requires less maintenance than the *700* gearbox. Drive from the motor is by a toothed belt.

At the same time the company intended to reduce the overall size of the projected design and to reduce its weight. However, as the new model had to be able to take all the 12 existing attachments, a requirement dictated by market research into overseas consumer demands, the height of the underside of the head was, of necessity, predetermined.

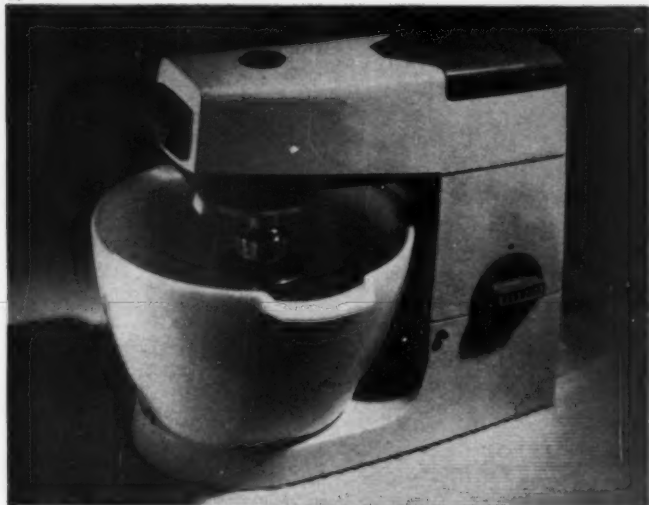
Market research, in various countries, played an important part in determining the basis for the projected design. For example, on the Continent housewives often make their own bread and use their mixers for mixing dough. This is a hard test for a mixer and one for which the *A701* had to be designed. Thus a motor with power enough for all uses was selected and incorporated into the *A701*. The design is double insulated, mounted on rubber bushings within the body casting.

Appearance

With detailed requirements set down and agreed at board level, Kenwood's engineers developed the components to meet the desired specification. Some sketches were completed to show how the *A701* would look, and it was at this point that the firm started to consider ways of presenting a design which had initial sales appeal and impact.

The designs produced by the company's staff, of which **5** and **6** show the trends of thought, were lacking the impact which the firm was seeking. C. Warner, works director, suggested that the advice of an industrial designer be sought and eventually, through recommendations by CoID's Record of Designers, Kenneth Grange was appointed as consultant. Mr Grange arrived at a time when the basic design was well under way, but this did not stop him querying the many limits he soon found himself up against. In the case of the body design, for example, Mr Grange would have preferred to have a secret hinge for the spring-assisted, lift-up head, **7** and **11**. As the body was already full of machinery there was no room – without making the whole body larger. Thus the hinge had to be fitted outside the body, requiring the small bulge seen in **8**. On the finished design, **1**, this is chamfered inwards at the base, making the protuberance seem smaller than it is.

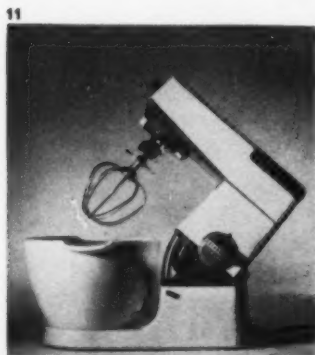
The clearance between the mixing bowl and body was reduced (cp **1** with **2**), presenting a more integrated shape. But so that a potato peeling device could be attached, whose bowl dimensions are greater than that of the mixer bowl, the inside of the body was



10 and 11 Production model of the new *Chef* mixer with mixing bowl and mixer attachment.

12 The liquidiser positioned on the mixer.

13 and 14 A mock-up of the liquidiser container, **13**, which after tests was modified as in **14**, a production model.



indented to give the necessary clearance, **9**.

At one time it had been thought necessary to include large cooling vents for the motor. However it was found during tests that this could be greatly reduced and the venting now consists of a small gap at the back of the join between head and body.

The detailing of the head was carefully considered in an attempt to minimise the heaviness and solidity of a rectangular shape. The pleasing result has a tapered shape and chamfered underside. By using the two-part head it has been possible to minimise weight by using plastics for the underside as opposed to the aluminium alloy main castings for head and body.

Choice of colour finishes was virtually agreed before the finished design was approved. Whereas the 700 models were available in white or cream with a choice of four colours for the plastics covers, stocking a variety of similar parts was uneconomical. Thus the A701 is limited to two main colours with grey plastics fittings.

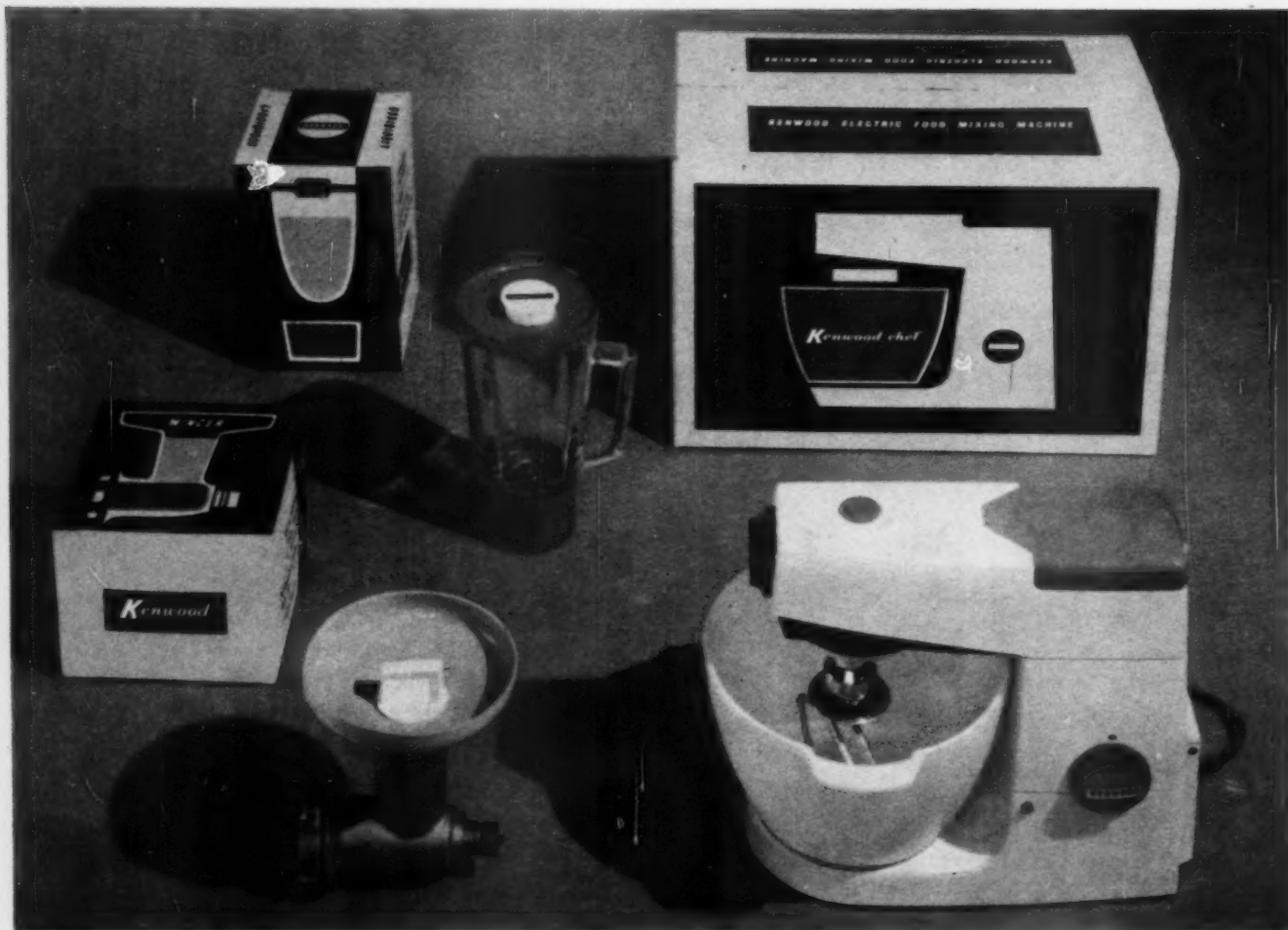
So far only two of the attachments have been re-modelled by Mr Grange, the mincer, **15 left foreground**, and the liquidiser, **14**. The development of the liquidiser provides an example of the type of problem that had to be solved. A model of Mr Grange's original design is to be seen in **13**. When a prototype was made and tested with hot liquids it was discovered that pressure can be built up inside the container when the motor is running at high speeds, thereby blowing off the top of the container. This has been overcome by providing lips over which the top is locked in position by a half turn.

Adverse comments have been offered about the shape of the mixing bowl which apparently differs little between old and new designs. In fact there have only been minor changes; one of the most important is in the addition of pouring lips incorporated in the lifting handles. Once again this is an example of the way the design has been developed to meet overseas requirements, for Kenwood has made the alteration to suit Canadian users, who, it seems, use large quantities of dried milk and so require some means of pouring liquids from the bowl. As regards the shape of the bowl, which to some extent conflicts with the crisp detailing of the mixer, it was mainly dictated by the action of the beaters. While the maker had considered using other materials which would be more easy to shape, Kenwood's researches showed that users prefer a glass mixing bowl, a preference to which the maker has adhered.

Packaging

Having taken so much care in the design of the machine itself, the company decided to ask Mr Grange to design the packaging. The result is shown in **15 (over)**, where the designer has introduced a

15 The Chef A701 mixer, together with its two re-designed attachments and new packs. £27 6s (including bowl and mixer attachment).



distinctive and neatly related packaging range. Mr Grange comments that one of his most successful steps was in finding a white corrugated board that was still strong enough to contain and protect the mixer, rather than the brown corrugated board which the company had previously been using. Although the original pack designs were in grey, black and white, the colours finally approved, red and blue, are a continuation of Kenwood's established house colours.

When a consultant is first engaged, the reception he receives is possibly determined by the state of progress of the product in which he is to help. Kenwood freely admits that before consulting Mr Grange there had been some hesitation about what course to take over the final design stages. The company was unhappy about

what it had done so far, and intended to make sure that the new model would fully justify the careful study and development which had already gone into the mechanical design. As soon as the decision to appoint a consultant was made there was a feeling of relief that, rightly or wrongly, something had at last been done.

The proof of the cake mix is usually in the eating. The firm points out that production of the new Chef A701 food mixer is double that of the preceding models; some 60 per cent of these are exported. Without the system of sub-assemblies which comprise the design it would not have been possible to reach these figures with the facilities available to the firm. Without overall co-ordination of the design, packaging and marketing, it is unlikely that such quantities could, in fact, have been sold.

REVIEW OF CURRENT DESIGN

A selection of items recently accepted for 'Design Index', the CoID's photographic and sample record of current well designed British goods. 'Design Index' forms an essential part of The Design Centre, 28 Haymarket, SW1, which is open on week days from 9.30 am - 5.30 pm, and on each Wednesday and Thursday until 9 pm.

1 Easy chair (model S410). Birch frame with seat and back of Latex foam on rubber webbing and coil springs respectively. Legs of mild steel, chromium plated. Cover available in 10 shades. Height 28 inches, depth 28½ inches, width 21 inches. DESIGNERS John and Sylvia Reid. MAKER The Stag Cabinet Co Ltd. £16.



2 Electric cooker (model Falco Royalty) of sheet steel, finished in cream or white acid resisting vitreous enamel. Eye level grill, hinged hob giving easy access to plain tray beneath. Built-in plate rack. Height 57 inches; depth 23½ inches; width 23 inches. MAKER Allied Ironfounders Ltd. £72 9s.



3 Printed tablecloth (model Pomegranate) in Irish linen. Four colourways. DESIGNER Lucienne Day. MAKER Thomas Somerset & Co Ltd. Approx £1 9s 6d.



Review of current design

4 Ceramic tiles (models *Byzantine 5020-5023, 5025*) of glazed earthenware, available in a wide range of colours. Suitable for exteriors and interiors. Sizes 6 x 6 inches, 6 x 3 inches, 6 x 2 inches and 4 x 4 inches. DESIGNER *Kenneth Clark*. MAKER *Malkin Tiles Ltd.* Approx £7 10s per square yd.

5 Spring loaded lever handle (model *Hyperion 62*), available in a variety of finishes. Plate 6 x 2 inches, lever 4½ inches long. DESIGNER *Oliver Stott*. MAKER *William Dibben & Sons Ltd.* From £1 14s 9d per pair.

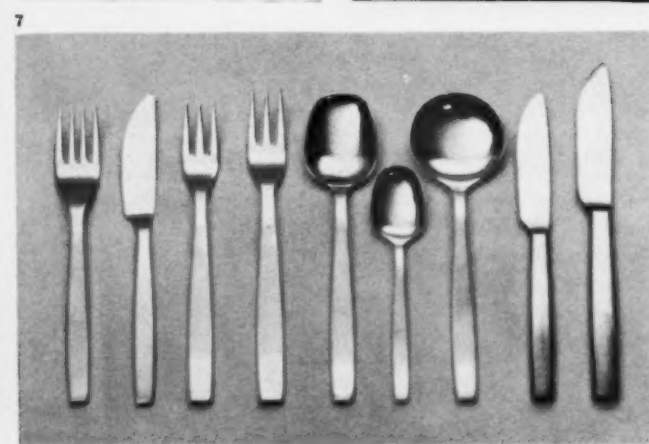
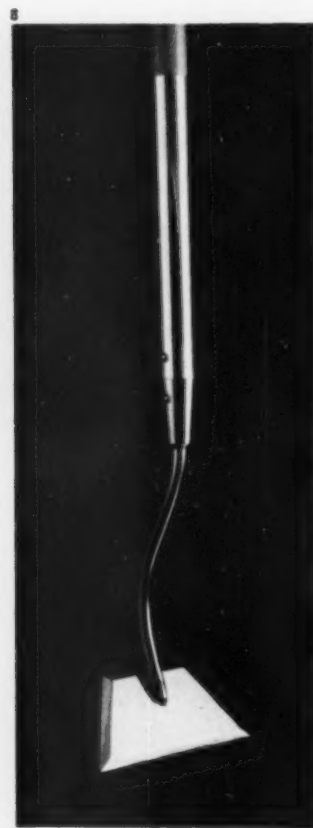
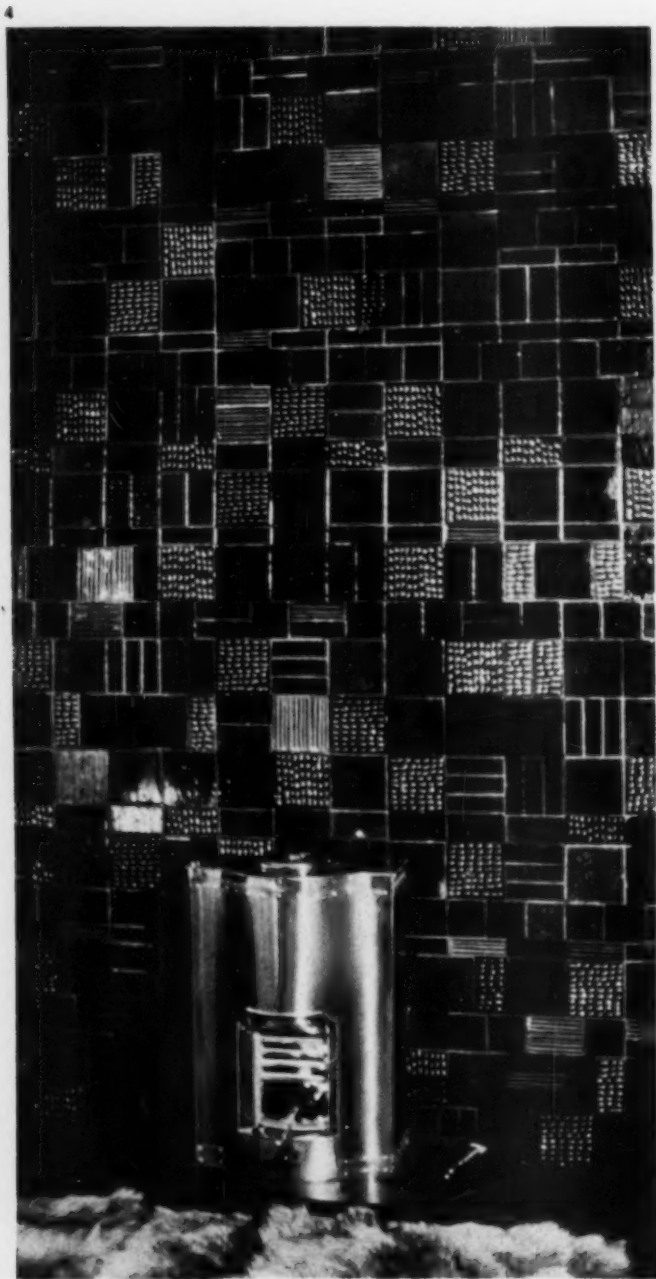
6 Cabinet (model *I*) in solid African walnut. Door (hung on left or right) veneered in African walnut, or cellulose-sprayed in various colours. Part of a range of modular furniture. Height (with castors) 22 inches; width 16 inches.

MAKER *Conran Furniture Ltd.* From £12 7s 2d.

7 Cutlery and flatware (model *Chelsea*): spoons and forks in EPNS, with mirror polished bowls and satin finished shanks and handles. Knives in stainless steel with mirror polished blades and satin finished handles. DESIGNER *Gerald Benney*. MAKER *Viners Ltd.* £2 5s. (7 piece place setting).

8 Hoe (model *8010*) with blade and shank of polished stainless steel. Shaft of aluminium alloy covered with pale blue plastics shrunk sleeving. Length 69 inches; width (of blade) 5½ inches. MAKER *William Marples & Sons Ltd.* £1 12s 6d.

9 Kitchen tidy (model *187*) in plastics, finished in red, blue or yellow, consisting of bucket with removable tray containing three compartments for



storing cleaning materials. Chromium steel handle with moulded plastic grip. Capacity of bucket 2½ gallons. MAKER *Stewart Plastics Ltd.* £1 9s.

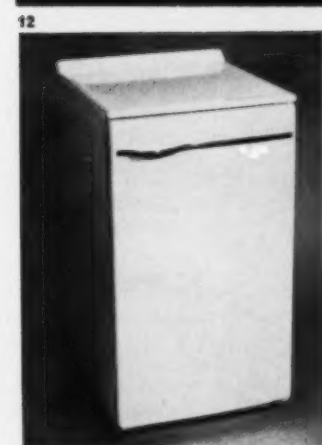
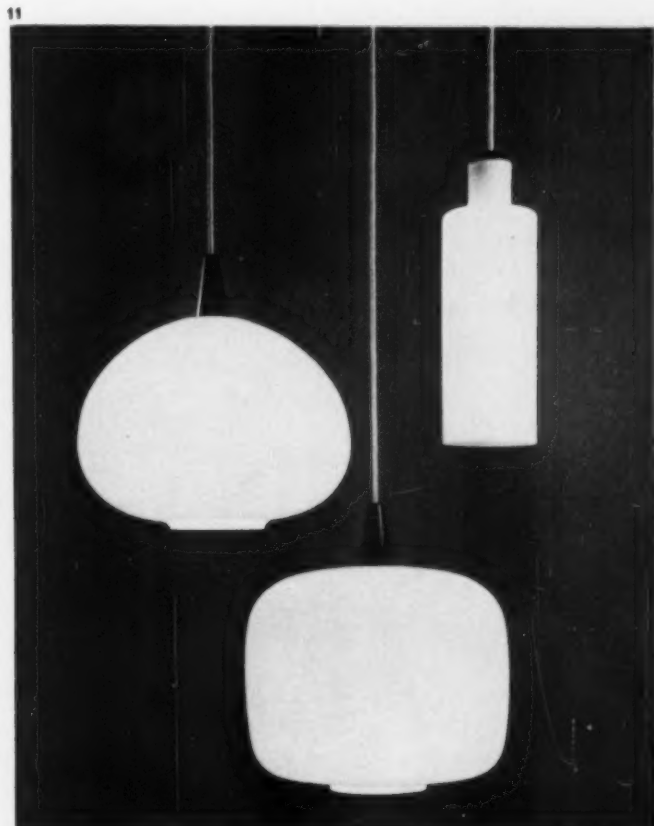
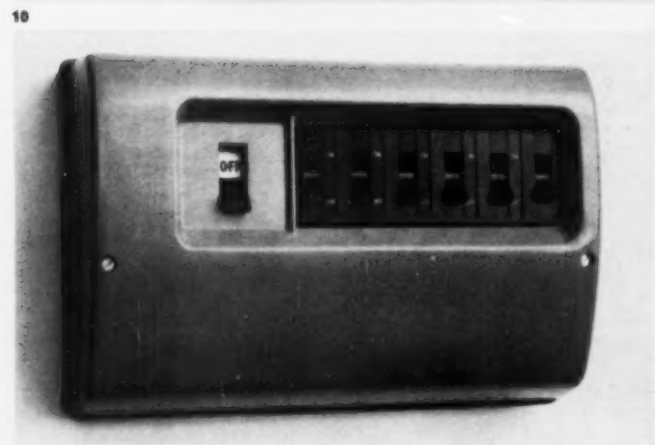
10 Miniature circuit breaker unit (model 256 type C50), with moulded case of thermo-setting plastics in silver grey. 60 amp ac double pole isolating switch. Height 7½ inches; depth 3½ inches; width 11½ inches. DESIGNER *John Vale*. MAKER *J. A. Crabtree & Co Ltd.* Price from maker.

11 Lighting glassware (models, left to right, *Latimer J166, E163, H165*) with three ply white opal glass shades, in glossy or satin finish. DESIGNER *Clive Latimer & Associates*. MAKER *Webb's Crystal Glass Co Ltd.* Prices from maker.

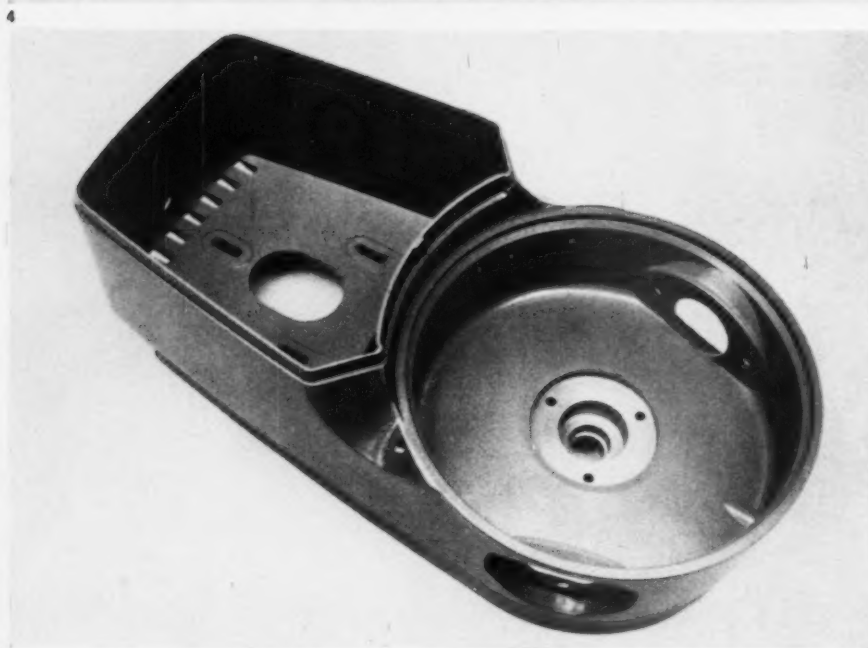
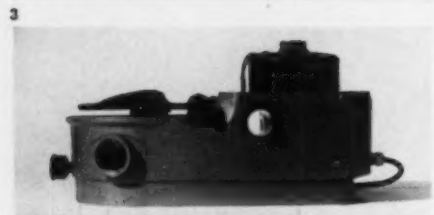
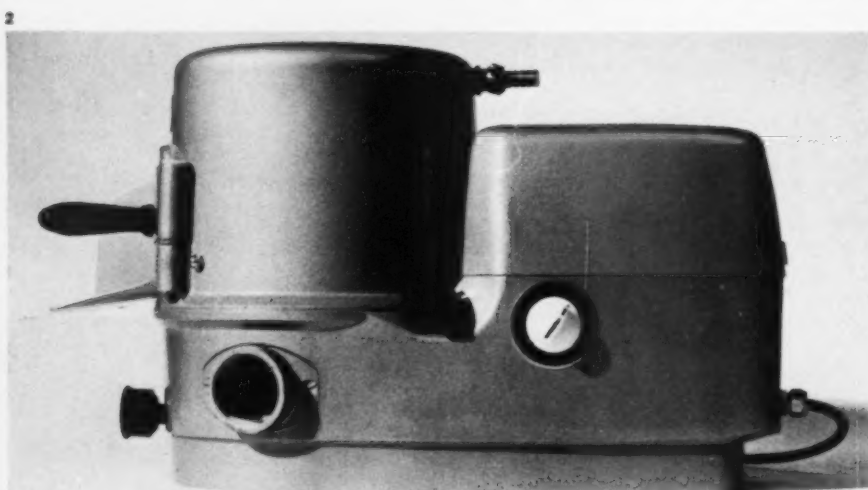
12 Refrigerator (model *Slimline 7504*) with cabinet of steel welded construction.

Food compartment and door liner of high impact, vacuum formed polystyrene. Polythene coated rod shelves. Cabinet, which is claimed to be rust proof, in white or cream, inner evaporator door in pink. Height 36 inches; depth 23½ inches; width 20½ inches. Food storage capacity 3·8 cu ft. MAKER *The English Electric Co Ltd.* £63 3s.

13 Dining chair (model *Palmerston*) with sapele mahogany frame in natural satin finish, preformed ply back veneered in Bombay rosewood with natural satin finish, and plywood seat with synthetic foam seat pad. Seat height 18½ inches; depth 15 inches; width 18 inches. DESIGNER *Arthur Edwards*. MAKER *White & Newton Ltd.* £4 11s 3d.



Redesigned for catering



After consultations with the CoID's Record of Designers, the Imperial Machine Co Ltd last year commissioned L. E. Wingfield to redesign its 7-lb potato peeling machine. His brief was to simplify production by more use of die-castings, and also to improve the rather cumbersome appearance of the machine, which is used in canteens, catering establishments and ships.

The machine's basic components consist of a cylinder with a removable abrasive lining, an agitating rotor, and a lower chamber into which the peelings are dropped. The designer was asked to retain the cylinder and door components for which expensive dies already existed.

Mr Wingfield's solution, 1-4, was to mount all the moving parts in one large die-casting, 4, which was cored out from above and below. A separate motor

cover die-casting gave easy access to the electrical equipment, and also allowed the mounting bolts to be concealed within the main casting. Alterations to details included replacing the clamp knobs, which were stock mouldings, by special mouldings which were cheaper to produce; cast-in lettering on the door area was removed and transferred to the rear face of the machine. A serial number and border were removed from the front name plate (which is still not entirely successful).

The firm was pleased with the result, and Mr Wingfield was asked to redesign further models in this range - a larger version of the 7-lb machine, and two pedestal models.

The firm has also introduced a free standing waste disposal unit, 5. This is a new product, and is also intended for use in catering establishments.



SELLING ALUMINIUM: THE NEW WAY

PETER E. M. SHARP

director and general manager, Westrex Co Ltd



Overseas review USA

"Design is being used in Alcoa's communications efforts in three distinct selling and public relations programmes, the sum of which bears witness to the extent to which the company is committed to acknowledging the present and future import of design in the economy." So said Arthur P. Hall, vice president in charge of public relations and advertising, Aluminum Company of America, at the recent design conference of the American Society of Industrial Designers. Mr Hall made no exaggerated claims for the company's corporate advertising programme when he said it was "based on design: on great, exciting design for tomorrow".

For more than five years Alcoa has been presenting its *Forecast* message – "there is a wonderful world of aluminium in the wonderful world of tomorrow" – indicating to designer and consumer how and where aluminium can be used. But Alcoa is not just flying a kite with its proposals, suggestions and novel ideas. Backing up the marketing programme are three large units: Alcoa's research laboratories, process development laboratories, and development division.

These groups are at the disposal of the manufacturer and consultant designer through the Alcoa design group headed by Samuel L. Fahnestock, manager of design. Perhaps it may be thought that many other companies have similar set-ups, and up to a point this is, of course, so. But as a manufacturer of raw materials with a minimum of clearly defined end 'products', the company's emphasis on design is unique.

To achieve a unity of policy, both in large scale sales effort and internal company tasks such as displays, packages and interior design, the design department is organisationally a part of the sales division, under the guidance of Frederick J. Close, vice president and sales manager. Mr Fahnestock controls the internal design department which advises users and designers on materials and production techniques, but Alcoa itself does not design anything. Instead, the company commissions outside designers to contribute



1 Front and back cover of the first edition of *Design Forecast*. Cover photograph by Emma Landau. EDITOR-IN-CHIEF Samuel L. Fahnestock. EDITOR Laurence S. Sewell Jr. ART DIRECTOR Murray Belsky.

Selections of designs from the Forecast Collection

- 2** *Music sphere*, an idea for a sound reproducing system. DESIGNER Lester Beall.
- 3** *View Box*, no tools are needed to erect this structure which measures 16-ft square by 8-ft high. It can be partially open, as illustrated, or closed and weather tight. DESIGNER John Matthias.
- 4** *People Chairs*, light hearted designs for outdoor furniture. DESIGNER Jay Doblin.
- 5** Table composed of three interlocking triangular units. DESIGNER Isamu Noguchi.
- 6** Harley Earl, who designed the Alcoa label, contributed this tripod package – a container for liquids.
- 7** *Solar Toy*, a sculpture powered by a solar cell mounted in an aluminium reflector. DESIGNER Charles Eames.

to the *Forecast Collection* – an extensive miscellany of design ideas in aluminium, ranging from the serious to the light hearted.

In keeping with the Englishman's view of America, Alcoa "does things in a big way". One of the most outstanding examples is the company's headquarters building in Pittsburgh – a "410-ft aluminium salesman" with curtain walls, wiring, plumbing, etc, in aluminium.

In 1955 Harley Earl designed the Alcoa label, the red and blue triangles which hallmarks Alcoa's literature. The literature ranges from the throw-away brochures entitled *Fragments* to the more recent *Design Forecast* books. The latter, according to Frank L. Magee, chairman of Alcoa, is "intended for designers and design-minded business executives". The main objective is to provide information for the designer about aluminium, giving fuller details of *Forecast* designs but including articles on the designer's approach, techniques used and even background of the designer himself. So far only two editions have been produced but the material and presentation should make the designer eagerly await the next edition.

Not all the *Design Forecast* books are devoted to analyses of product designs in aluminium. For example, in the first edition there is an appraisal of Charles Eames' *Solar Toy* from the *Forecast Collection* (a sculpture powered by a solar battery) and a criticism of styling in which the wheel hub of a car is nicely described as "a cross between a turbine rotor and a vegetable shredder, trying desperately to look sleek and sporty, but somehow managing only to look confused".

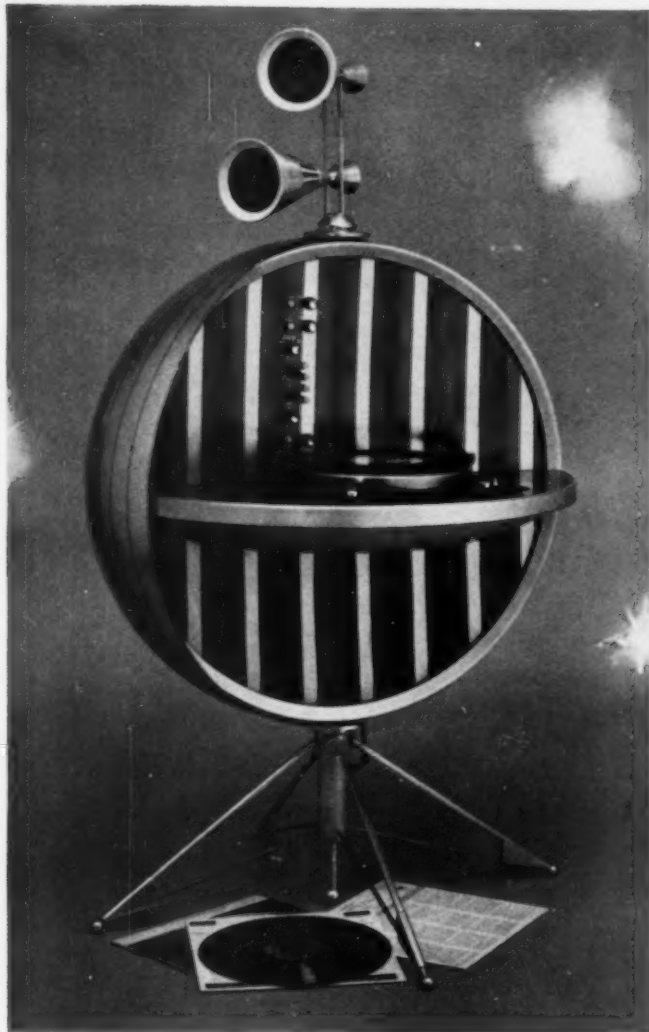
All the literature produced by Alcoa is of interest – a book on the

30-storey aluminium clad building in Pittsburgh, the annual report with cover printed on aluminium foil and a series of elaborate and, presumably, expensive advertisements designed for the American journal *Industrial Design*, printed in four colours on aluminium foil laminated to paper. Subsequently, for an exhibition, a gramophone record sleeve was produced using this technique of printing on coloured foils; it so attracted Columbia (US) that the company made a recording to match the exotic sleeve, and ultimately marketed it – an unusual example of packaging dictating the product.

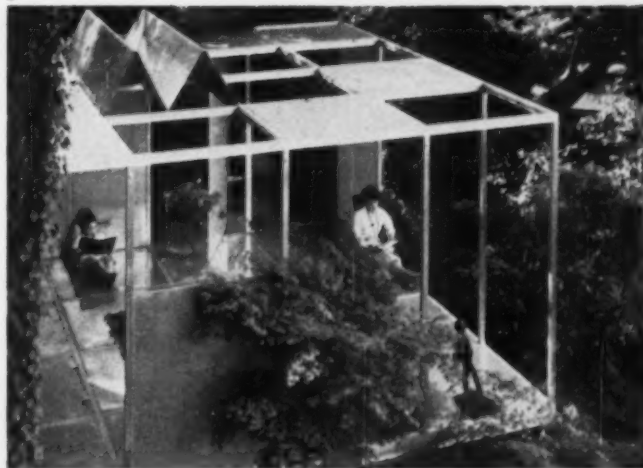
Expanding its policy of stimulating interest in industrial design, Alcoa instituted its *Industrial Design Awards and Student Design Merit Awards* in 1959. The latter are given annually to a student from each of six industrial design schools. The students are chosen by their respective faculties for the outstanding student project involving the use of aluminium. Alcoa freely admits that with its student programme the "goal is long-range; an aluminium-filled, designer-influenced tomorrow".

Among manufacturers of raw materials, no one so far matches Alcoa's approach, although some metal industries produce good journals (notably steel, copper). Another example along Alcoa's lines is Pilkington's *Glass Age* towns, but the comprehensive follow-up programme and high pressure approach is lacking. There is no doubt that Alcoa's ventures have reaped dividends, and now that the firm is linked with ICI in this country under the name Impalco, it is to be hoped that British designers will be able to contribute to the *Forecast Collection*; but this is not likely to happen within the next two years.

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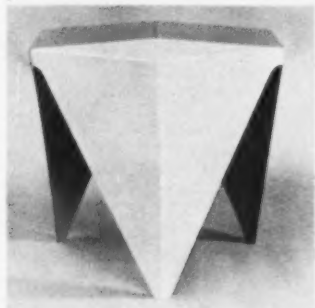
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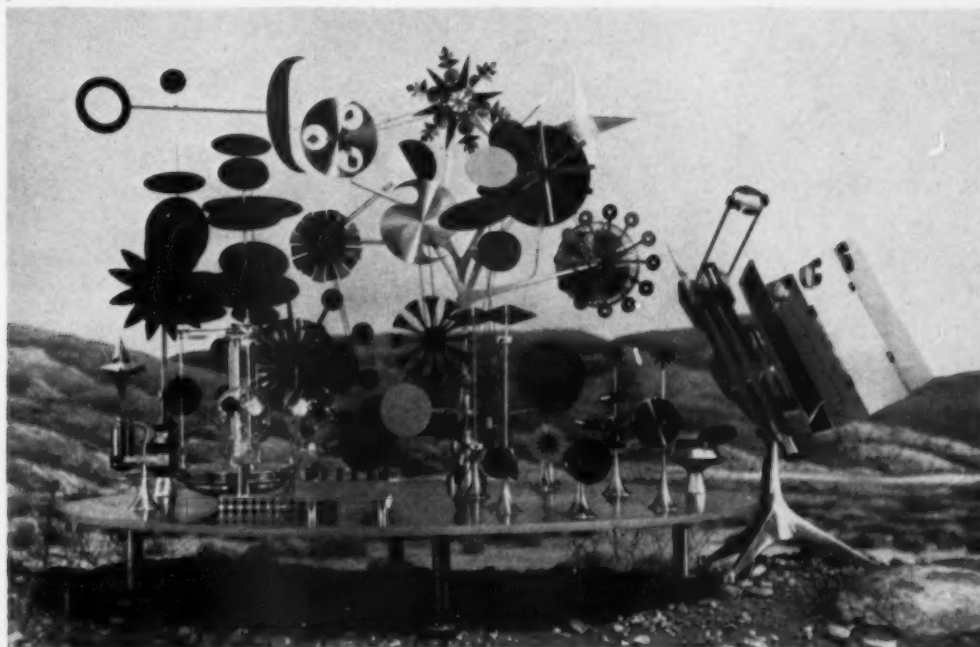
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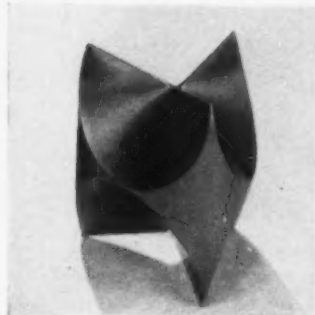
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Alcoa building

8 The 30 storey Alcoa headquarters building in Pittsburgh was completed in 1952. It is said that the dominant pattern formed by the aluminium curtain walling suggested the basic design element for the triangles of the Alcoa label (see page 73).



9 Double spread from *Metal in Motion*, a humorous presentation of technical information on some properties and applications of aluminium and its alloys.

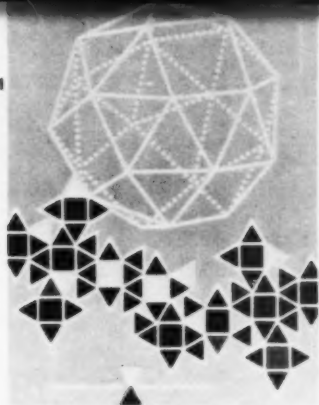


10 Front cover and double spread of a booklet about a play sculpture from the *Forecast Collection*. The sculpture was shown at the *American Exhibition* in Moscow, and was designed by David Aaron.

this book has two titles
it will be preserved in the
Alcoa archives as **Alcoa
Goes to Moscow** but the
real title can only be—
**Everywhere, Kids Have a
Marvelous Time!**



11



continued

11 and 12 Two of the series of advertisements published in *Industrial Design* which were printed on aluminium foil laminated to paper.
11 DESIGNER James Valkus.

12

Aluminum is texture . . . Alcoa is Aluminum .

Texture translates the feel of an idea; a task perfectly suited to aluminum. Expressive, impressionable, receptive to the subtlest shadings of tone and pattern, aluminum mirrors imagination as no other metal can. Alcoa invites you to share its intimate knowledge of this most versatile metal. How? Just turn the page.

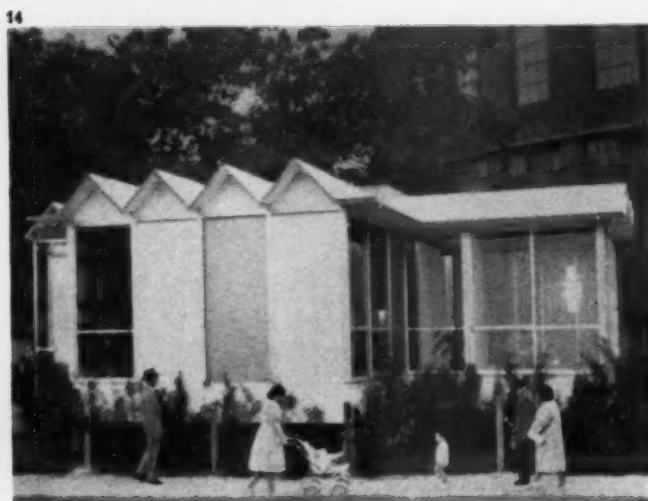
Aluminum Company of America





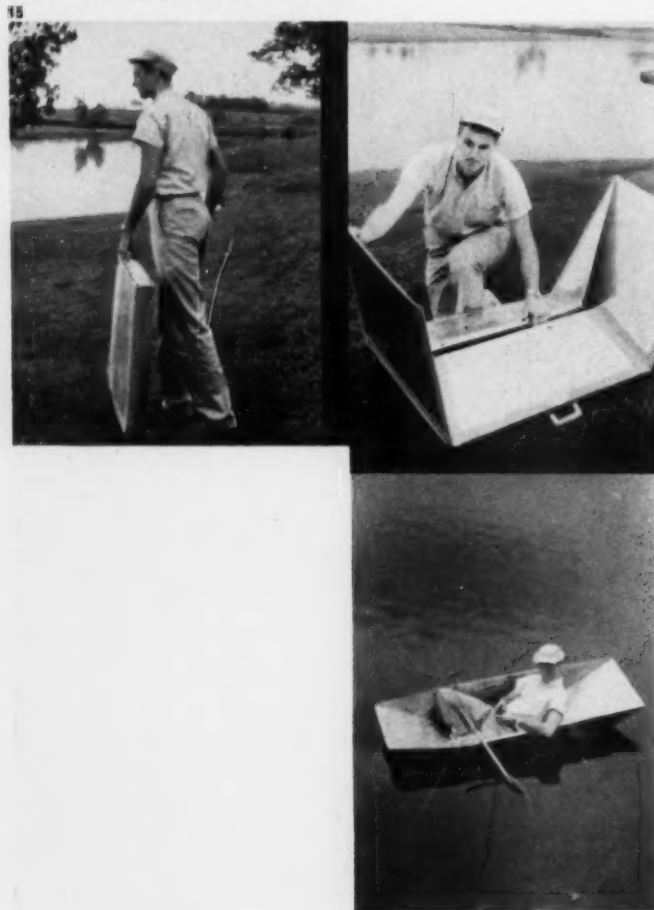
Alcoa House

13 and 14 The *Casa Americana* at the recent *Triennale* had walls formed from sandwich panels of aluminium and foam plastics, with a folded sheet roof. The designer was John Matthias; Walter Dorwin Teague Associates selected designs for the interior.



Design Awards

15 One of the six *Student Design Merit Awards* for 1960 went to John E. Thompson, Department of Art, Illinois University, for his *Polliwog* folding aluminium boat. Weighing only 27 lb, the boat folds into a unit measuring 2 ft x 3 ft x 6 inches. The metal sheets are joined by plastics hinges.



16 The *Alcoa Industrial Design Awards* winners are selected annually by an independent jury for outstanding quality of design using aluminium. Among the three 1960 recipients was Channing Wallace Gilson, who designed the closed circuit television camera for International Telephone and Telegraph Corp (DESIGN 133/60).



QUOTES

The age of the consumer

James Noel White, deputy director CoID, speaking at a public lecture, held under the auspices of the Council of Scientific Management in the Home on The Critical Consumer, a New Patron:

"... The public is gradually tumbling to the fact that it may have a mind of its own, that it need not only be told what it wants, but can do some of the telling. And on the few occasions when the public has found its voice, as it did over drip-feed oil stoves, the consequences have been rapid. But usually it needs some grisly accidents and some energetic journalists before it becomes really articulate in the face of the massive immobility of industry. In order to create a consistently articulate public, there must be a miracle of organisation and, unlike the control of credit, this cannot be done by decree. As I see it, it will only be achieved by the forces of enlightened self interest, such as created the trade union movement, and in the long run it could be subject to similar abuses, although that is a very distant prospect - I mean it could be subject to manipulation.

"... There is a vast task to be done by consumer organisations to establish the basic measurable facts about the products of industry, and these are essential to the evaluation of manufactured goods. This is a vital service to the community which every intelligent citizen should feel bound to support and whose existence Parliament should ensure.

"... I do not believe that independence of the manufacturer is the only basis on which to improve the quality of goods offered to the public (if I may use an old fashioned word). I think it is feasible that a comprehensive system of testing for a wide range of goods could be established which could produce valuable and unbiased information for the protection of the consumer and at the same time be supported by all the interests concerned. Such a system would have to provide manufacturers with test results more thorough than are available from their own means of testing at the present time; on the other hand, they would have to contribute to the cost of the system and abide by its findings. The operation of the system would have to be in the hands of an independent and respected authority. In the same way the consumer would have to accept its authority and recognise that many factors such as methods of production, distribution and investment all affect the nature of a product."

ORGANISATION FOR TESTING

"... At the moment I believe that no organisation has the means of testing widely on a thoroughly comprehensive scale. But it is too easily assumed that because a test is carried out by a manufacturer it is automatically suspect, and that if it is carried out in the name of the consumer it is comprehensive and final.

"... We must set this question of a testing organisation against the whole background of consumer education. And this is not only a responsibility of industry, Government and councils, independent and quasi independent. It is the responsibility of everyone who goes into a shop and pays hard earned cash for British goods. Every shopper is do-

ing the country a good turn when he, or more likely she, is critical of the goods offered her, and she is putting a nail in the country's coffin when she accepts shoddy goods of poor material, poor workmanship and poor design. And I would add quality is what we want and however good the materials, or the workmanship, you cannot have quality if they are not used to a good design. And that is why the CoID insists on design as an essential part of quality."

Designers' dilemma

An oration on the theme Larger than Life, given at the Royal Society of Arts by A. B. Read, past master of the Faculty of Royal Designers for Industry:

"... Without the standard of workmanship and sense of quality that the designer-craftsman inherited and understood, the designer for industrial production has today to design for new materials and processes and also has to collaborate with many other specialists. His influence is so often diluted and his ideas compromised to meet industrial or commercial expediences. The products so often reflect these compromises, and although many are good and some occasionally are excellent, there is obviously a crying need for a better understanding of those basic standards of design and quality that have remained, and always will remain, constant and sound.

"... There is a monotony in the repetition of form common to refrigerators, furniture, heaters or office blocks... Original design seems to have surrendered its liberty and versatility to a somewhat tyrannical and all enveloping style that is becoming wholly international, and in this surrender designers have been submissive and collaborative.

"The journals are filled with illustrations and descriptions of products, buildings and interiors looking alarmingly alike. Photographs of their designers bent over their drawing tables are accompanied by case histories detailing the years of study and research, and the months of anxiety and painful labour that led up to the birth of their brain children.

"The design content of the product - a tooth brush perhaps - and the talent of the designer are frequently magnified out of all proportion to their importance and their place in the pattern of our way of life.

"The present system of art education in this country is to be changed within the next few years... Colleges and schools of art will soon have the opportunity and the responsibility of setting up at registered centres their own examinations for the National Diploma in Art and Design, and will have freedom to establish their own courses of training leading to this award.

"There has been unanimous agreement that the practice of the fine arts and drawing must form the basis of all art education, including the training of designers. Breadth of experience in the fine arts can give an appreciation and understanding of form, colour, line and quality and a sensitivity to the possibilities of their right relationships that cannot be developed in any other way.

"The short cut to specialist competence is no

substitute for this longer course of study and broad experience. Designers with this wide art training and with the artist's passionate urge to reveal only the truth could bring new and stimulating qualities to design in all fields. They might be expected to give a lead to industry rather than to follow it. Too much concern with current styles and possible trends leads only to an easy and dangerous reliance on the inventiveness or ingenuity of others. Designers must preserve their determination to be true to their convictions if they are to become vital contributors and not merely old contemporaries. Industry in the face of world-wide competition will need to look for and to find designers of the right calibre who are truly creative and not imitative."

The jackdaw age

Jacquetta Hawkes, giving the 1960 Design Oration to the Society of Industrial Artists at the Royal Society of Arts, on the theme of Patterns and Cultures:

"... Now to try to look at us and our arts and crafts with an archaeologist's eye... Most significant of all, from our present point of view, is the deadly imitiveness, the jackdaw pilfering of styles. To use a former style and adapt it creatively as was done in the classical Renaissance and the best of the Gothic revival is quite another thing. But think of all that tired and blown-up 'Georgian' building which is still going on all round us, think of the thousands of yards of planks being nailed on to Tudor fronts, think of those strange sub-Egyptian motifs - I think they derive from the winged disc of the Sun God - which still appear on modernistic cinemas and factories. Think of that Regent Street frontage of Liberty's with its most baffling juxtaposition of what I take to be Greek triremes with Chinese sages, or the Roman-monumental of Maples in Tottenham Court Road... There is the horror of the bedroom and sitting room 'suites' on which working people are persuaded to waste their savings or stake their future wages; the choking miles of materials limply repeating Queen Anne and Georgian and Victorian and Cubist patterns. Frightful and utterly depressing.

"But I think the careful archaeologist would also find some evidence, still pitifully small, to suggest better things on the way. If he were being careful about his dates as between, say, 1930 and 1960, he would observe that some of these manifestations of our Philistinism-cum-decadence were growing slightly less frequent, and some new and much more promising manifestations appreciably more frequent. He would see buildings, public and private, that were not Greco-Roman or Gothic or Tudor or Georgian or even Egyptian, but sound and pure, if somewhat inhuman, twentieth century. And most conspicuously he would notice this new element in smaller things - in textiles and ceramics and glass, household equipment of all kinds. He would readily deduce that in these things the individual mind and imagination had managed to gain control of the machines, and to use them as effectively as they once controlled living hands. But, if he were studying the country as a whole, the proportion of this genuine twentieth century culture would seem so small that he might think it was created by some tiny intrusive band of aliens."

£200

£100

£50 PRIZES!

A COMPETITION

open to all students
and practitioners
of commercial and
industrial design

design a symbol*

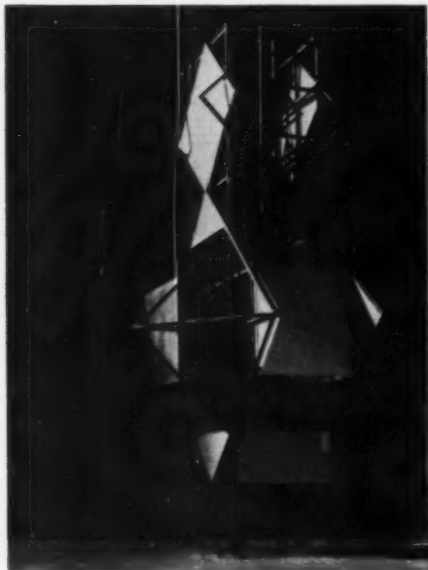
for the
JOSEPH
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*

*Full copyright fee
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ANY design finally chosen
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DETAILS FROM THE
COMPETITION SECRETARY
JOSEPH RANK LIMITED
MILLOCRAAT HOUSE
53 EASTCHEAP, LONDON E.C.3

MISCELLANY



Experiment in architecture

In July this year 1,500 architects will meet in London for the Congress of the International Union of Architects; their theme will be *New Techniques and Materials - their Impact on Architecture*, and the two temporary buildings that Theo Crosby is designing for the South Bank site, ABOVE RIGHT, will be a practical demonstration of this theme.

Three leading manufacturers in the building industry - The British Aluminium Co Ltd, Cape Building Products Ltd and Pilkington Brothers



Ltd - have sponsored the design of the headquarters building (foreground, ABOVE). Components for the building will be prefabricated from materials supplied by the three firms involved - aluminium, Asbestolux and glass. The roof is composed of a mass of aluminium tetrahedrons on an 8-ft sq base, over 2,000 sq ft of glass will be used for the external walls, and Asbestolux insulation board is used externally and internally.

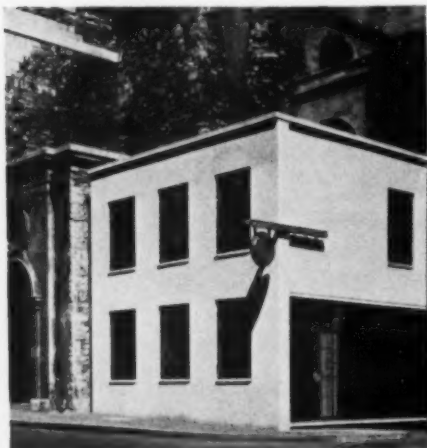
By means of this co-operation the three manufacturers intend to demonstrate that it is "possible to evolve an aesthetic technology in modern architecture, and that it must be based on real collaboration between architect, artist and building manufacturer". As a practical example, the sponsors have commissioned a group of artists to produce a series of murals that will form an integral part of the buildings rather than "superimposed ornament". The artists include John Ernest, William Turnbull, Mary and Kenneth Martin, and Anthony Hill, and

their murals will be mainly in Asbestolux.

The exhibition building (background, ABOVE), will use available materials that can be returned to stock. The frame will be in steel, the roof will be largely polythene sheeting, and the walls made from scaffold boards which will form a gigantic hoarding for Edward Wright's multi-lingual design of the exhibition's title - *The Architecture of Technology*. The tower, ABOVE LEFT, with asbestos-cement panels, was designed by John Ernest.

The exhibition itself is being designed by Theo Crosby from material sent in by member countries of the IUA; there will also be supporting exhibitions of students' work, and a display by the National Book League. Both buildings are being designed on a 4-ft module; the contractor is Taylor Woodrow Construction Ltd.

The congress will be held from July 3-7, but the exhibition will be open to the public for a month after the opening day.



Chicago in the City

A new two-storey prestige building has recently been erected in Walbrook in the City, next door to the sixteenth century church of St Stephen's for the National bank of Chicago. The simple elevation to Walbrook ties in satisfactorily with the classicism of the Wren church door, and it is something of a relief to see a modest, small building, ABOVE LEFT, in an



area which is now better known for massive office blocks.

This is not a bank in the normal sense and exists to conduct day-to-day business as the European representative of the parent company in the U.S. It does not have to maintain storage space for cash nor does it require an extensive filing system. Without this problem, the architects have been able to design

the building in the simplest terms, and, by using an open plan, to create an intimate yet dignified reception area on the ground floor, ABOVE RIGHT. Although operated by an American firm, most of the furniture and equipment has been bought in England. ARCHITECTS Rugarth Architectural Services Ltd, D. Armstrong Smith and David M. Critchlow.

Wardles - the name for vinyl fabrics



If you really want to see just how splendid Wardles vinyl fabric can look on walls or furniture you can see them in new buildings like Thorn House and The Shell Centre, Skyways Hotel and in many Dolcis branches and, in fact, in hundreds of places where people have insisted on having up-to-date, sensible and beautiful decorating fabrics. You can get the feel of Everflex and Aëroflex just by sending this coupon.* We will send you free samples of each fabric.



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NEWS

APPOINTMENTS

CoID changes

The CoID welcomes four new members of Council recently appointed by the President of the Board of Trade: Mrs Elspeth Juda, associate editor and director, *The Ambassador* magazine; Ernő Goldfinger, chartered architect and town planning consultant; A. Walter James, editor, *The Times Educational Supplement*; Lord Mancroft, director, Great



Elspeth Juda



Ernő Goldfinger



A. Walter James



Lord Mancroft

Universal Stores Ltd, and Ian S. Wilson, managing director, Pillans and Wilson Ltd, who replaces Sir Charles Connell as chairman of the Scottish Committee of the Council.

Three members have been re-appointed: Roger Falk, chairman, Marketing Development Co Ltd, deputy chairman, Provincial Insurance Co Ltd; Michael Hope, chairman and joint managing director, Henry Hope & Sons Ltd; and D. W. Morphy,

joint managing director, Morphy-Richards Ltd.

Five members have retired: Sir Charles Connell, chairman, Charles Connell & Co Ltd, and also chairman of the Scottish Committee since March



Ian S. Wilson

1958; Mrs M. Harrison, curator, Geffrye Museum; G. D. Mouat, chairman, National Technical Sub-Committee of the Draughtsmen's and Allied Technicians' Association; J. M. Richards, architectural critic and author, and editor *The Architectural Review*; and C. M. Vignoles, managing director, Shell-Mex and BP Ltd.

Furniture consultancies

Aidron Duckworth has been appointed design consultant to Vitesta Ltd, the newly formed subsidiary of Vitafoam Ltd. Vitesta aims to provide the furniture industry with a design and production service in glass reinforced resin; one of Mr Duckworth's first commissions, an easy chair, was illustrated in DESIGN 147/56.

Frank Guille has been appointed consultant designer to Vipboard Ltd, the veneered chipboard manufacturer. He will be working on designs for 'do-it-yourself' furniture units for home construction.

On a plate

Eric Clements has been appointed design consultant to Mappin & Webb Ltd, the silver and plate manufacturer. He has recently designed the cutlery and hollow-ware that Mappin & Webb is making for the new P & O - Orient Line *Canberra* which sails on her maiden voyage in June.

Appointment in typography

Edward Wright has joined the Whitefriars Press Ltd as typographer. Mr Wright has taught at the LCC Central School of Arts and Crafts and the Royal College of Art, and he is at present teaching at the London School of Printing. He has examples of his work in New York's Museum of Modern Art.

CONFERENCES AND COURSES

Design international

The second General Assembly of the International Council of Societies of Industrial Designers (ICSID) is being organised this year by the Italian Society of Industrial Designers, and will be held in Venice from September 14-17. The official British delegation will be appointed by the SIA council and the CoID. Details are available from: Misha Black, president, ICSID, 37 Duke Street, London W1.

Furniture for teachers

A course for full and part time teachers in technical colleges and schools of art on *New and Traditional Materials - their Selections and Use in Modern Furniture*

Manufacture, will be held at Missenden Abbey Adult Education Centre, Great Missenden, Bucks, from April 10-13. Details are available from: The Warden, Missenden Abbey, Great Missenden, Bucks.

Method study

The Furniture Development Council announces three practical courses on method study, each lasting for three weeks. They are directed at selected employees from the smaller and middle sized firms.

The first training course will be held in London from April 10 - 28, and the tuition fee will be 30 gns. Details are available from A. Gilmour Brown, Method Study Officer, Furniture Development Council, 11 Adelphi Terrace, Robert St, London WC2.

EXHIBITIONS

Nottingham centre

The Design Centre comes to Nottingham from April 7-May 6, when Griffin and Spalding, a leading local retail store, will stage a display of some 450 products chosen from the CoID's 'Design Index'. On the first day Paul Reilly, director CoID, will lecture on *Design Today* at the Nottingham and District Technical College at 7 pm; and on April 29 the University of Nottingham Institute of Education will hold a one-day course on *The Appreciation of Design Today* in co-operation with the CoID.

International design in Northampton

The Northampton Art Gallery is to hold an international exhibition of modern design from May 6-June 3. *The Design Alive* display will include exhibits from Denmark, Sweden, Finland, West Germany, Italy, the USA and Japan, as well as items selected from the CoID's 'Design Index'.

Britain overseas

The Board of Trade has invited over 1,500 British firms interested in the Indian market to join in the British display at the *Indian Industries Fair*, to be held in Delhi from November 4-December 21. Charles Munro will design the official exhibit in conjunction with the Central Office of Information.

The Engineering Centre, Birmingham, will be organising a group stand at the *British Equipment for Mexican Industry* exhibition to be held in Mexico City from September 19-October 15. The exhibition is jointly sponsored by The Dollar Exports Council and the Federation of British Industries.

At home...

International Packaging Exhibition, Olympia, May 29-June 3.

International Instrument Show, B & K Laboratories Ltd, Park Lane, London, June 19-23.

National Radio and Television Exhibition, Earls Court, August 23-September 2.

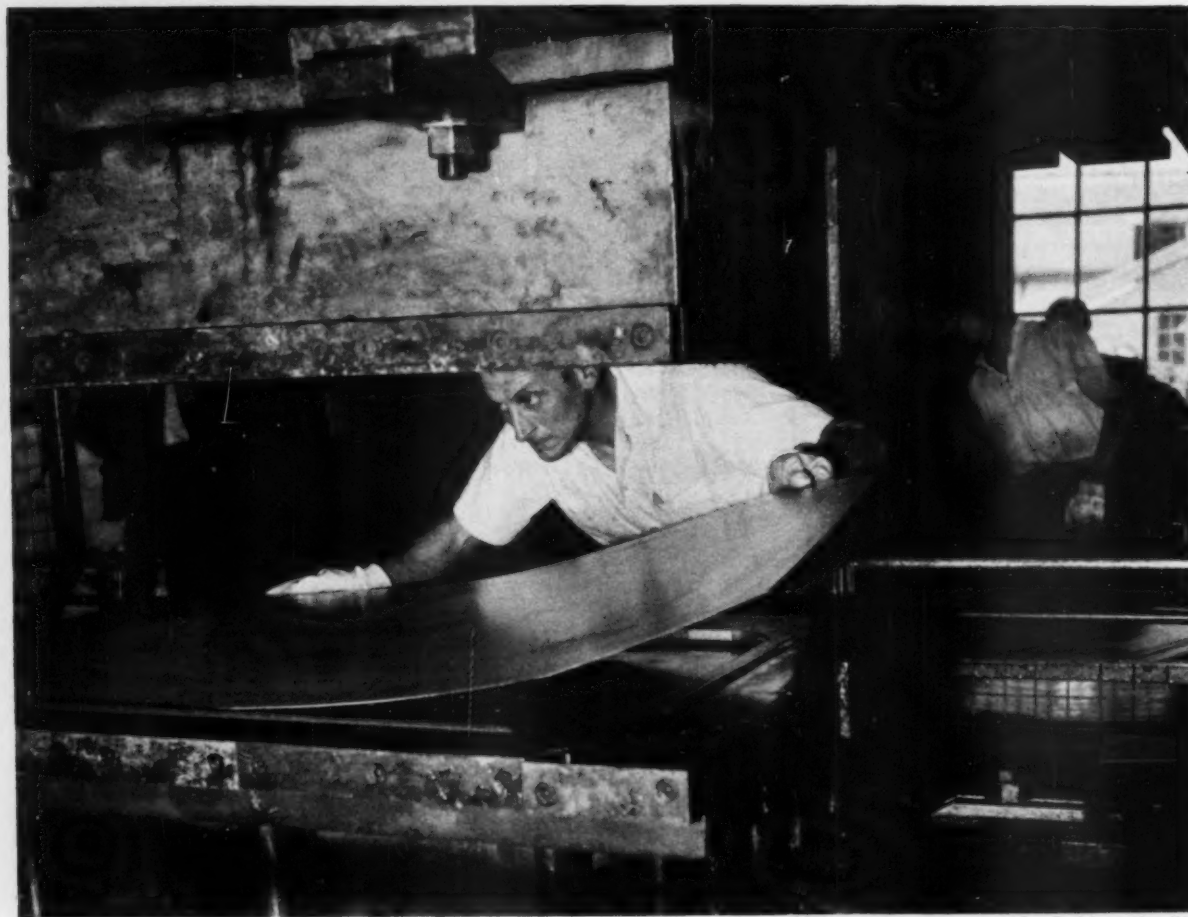
International Caravan Exhibition, Earls Court, September 20-30.

... and abroad

Design Engineering Show, Detroit, May 22-25 (apply Clapp & Poliak Inc, 341 Madison Avenue, New York 17, NY).

International Trade Fair, Sydney, August 1-12, (Industrial Public Relations Service (ISRW) Pty Ltd, Box 4962, GPO, Royal Agricultural Society's continued on page 85

EASIER DRAWING AND PRESSING...



Photograph by courtesy of Lec Refrigeration Ltd

Another reason why industry is changing over to

DRAGONITE

ELECTRO-ZINC COATED SHEET STEEL

DRAGONITE is sheet steel which has been given a coating of pure zinc on both faces. It has a number of advantages over ordinary, uncoated sheet steel. During drawing and pressing operations, for instance, the surface properties of Dragonite are maintained. In fact, the fine-grained structure and natural ductility of pure zinc actually assist fabrication

by acting as a dry, solid lubricant.

This ductility of Dragonite cuts manufacturing costs because it makes longer press runs possible and lengthens tool life.

There are many more good reasons why you should be using Dragonite. For fuller details, please write for a copy of the *Dragonite Technical Handbook* to:

These are some of the industries in which Dragonite is being used extensively: Office Equipment; Elevators; Agricultural Equipment; Automobile Industry; Domestic Appliances, Radio Equipment, etc.



THE STEEL COMPANY OF WALES LIMITED

Sales Offices: United Kingdom—Abbey Works, Port Talbot, Glamorgan. Overseas—Margam House, 26 St. James's Square, London, S.W.1

Showgrounds, Sydney, New South Wales, Australia). International Fair of Technics and Technical Achievements, Belgrade, August 23-September 2 (Beogradski Sajam, Bulevar Vojode Miska 14, Belgrade).

COMPETITIONS

Poster design

The CoID, in association with 15 advertising and other organisations, is sponsoring a new series of design awards – the *British Poster Design Awards, 1961/2*. There will be a maximum of 25 awards, and diplomas will be given to the advertiser, advertising agency, designer and printer responsible for each award winning poster.

The judges are Christian Barman, chief publicity officer, British Transport Commission; James Fitton, designer; Milner Gray, senior partner, Design Research Unit; Paul Peter Piech, art director, Service Advertising Co Ltd, and R. Geoffrey Smith, joint managing director, W. S. Cowell Ltd.

Co-sponsors with the CoID include the Advertising Association, the British Federation of Master Printers, the British Transport Commission, the Civic Trust, the Design and Industries Association, the Institute of Practitioners in Advertising and the Society of Industrial Artists. Posters which have been on display from April 1 1961 – March 31 1962 will be eligible for entry.

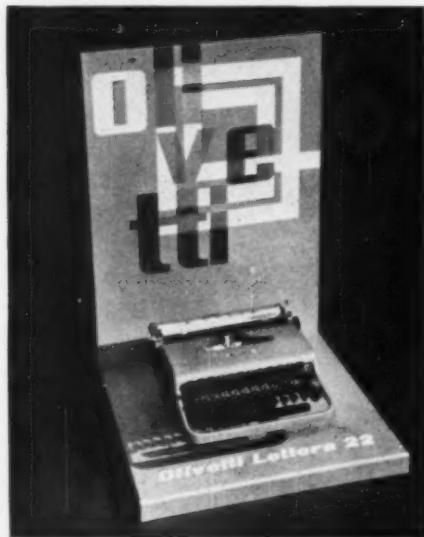
Entries will be accepted from the advertiser, advertising agency, designer or printer. They must be submitted to the CoID between April 1 – April 30 1962. Further details are available from Mrs C. Mill, CoID, 28 Haymarket, London sw1.

Aluminium furniture

The British Aluminium Co Ltd, in collaboration

Motif for typewriters

This new Olivetti publicity motif was designed by Henrion Design Associates for the firm's winter point-of-sale campaign. It consists of the letters of the firm's name in different colours superimposed on the 'O' trade mark in white and will be used for posters, displays and display cards.



Canteen for television

Hulme Chadwick designed the interior of this canteen built for the A T V studios at Boreham Wood. The canteen and adjacent rest rooms are used by both staff and directors. The furniture and furnishings, chosen by Mr Chadwick, include Arne Jacobsen stacking chairs, Conran tables and Finnish

light fittings and cutlery.

The canteen area completes the first part of a major interior design scheme that Mr Chadwick is carrying out at Boreham Wood, and he has now started work on the administrative block. The architect is Stone, Toms & Partners.

with the CoID, is sponsoring an aluminium furniture design competition. It is intended to appeal to professional and student designers, and competitors will be asked to "design an article or group of furniture for the industrial, domestic, institutional or public services markets which could, with advantage be made wholly from, or incorporate a major proportion of aluminium".

The first three prizes will be of £250, £150 and £75, and there will be a special prize of £50 for the best student design. The judges will be Basil James and A. B. Kirkbride (respectively director of sales and consultant industrial designer to the British Aluminium Co Ltd), A. Gardner Medwin, head of industrial division, CoID, and Ashley Havinden. The last date for receipt of entries is June 30, and competitors should write as soon as possible for further details to Furniture Design Competition, The British Aluminium Co Ltd, Norfolk House, St James's Square, London sw1.

MISCELLANEOUS

US travel

The English-Speaking Union announces four travel grants to the United States. Applications are invited from men and women of British nationality aged between 30 and 50, who are experienced and practising in a branch of the arts such as painting, sculpture, music, architecture or design. Museum curators and art historians are also eligible. The grants may be taken up after mid September 1961 but must be completed by July 1 1962.

The closing date for applications is May 1. Application forms and further particulars may be obtained from the Secretary, The English-Speaking Union, 37 Charles Street, London w1.

Packing for Europe

James Pilditch, managing director of Package Design Associates Ltd has recently announced

details of an agreement he has signed with the French Packaging Institute. The institute will provide PDA with information concerning packaging requirements for products to be sold to the European Common Market; technical data on new packaging materials and machinery, etc; market research facilities, and facilities to test the visual as well as the technical effectiveness of packages.

PDA has also announced the appointment of Neil Shakerly and Geoffrey Woollard as senior designers for packaging and graphic design.

Graphics register

The SIA now has a 'visual register' at the offices of the National Book League, Albemarle Street, London w1. The register shows samples of the work of the SIA Illustrators' Group, and the SIA hopes that it will become a comprehensive register of British illustration.

Facts for export

Business men and industrialists drawn from the 30 members of the Export Council for Europe (chairman Sir William McFadzean) are taking part in a fact finding mission on European trade.

They will meet European representatives of the British Government, and importers of British goods, to discuss such questions as market needs, price, quality and design. They will investigate complaints about British exporters, as well as success stories.

Carpet quality

In addition to the *Test-Quality* labels which appear on all carpets containing Courtaulds' carpet fibres, Courtaulds Ltd has now introduced new *Extra Duty* labels to be used on carpets that the firm "can confidently recommend for any domestic location". The labels will also indicate whether the carpets are Axminster, Wilton, or tufted.

The whole vexed question of carpet grading systems is now being studied by the British Standards

continued on page 87

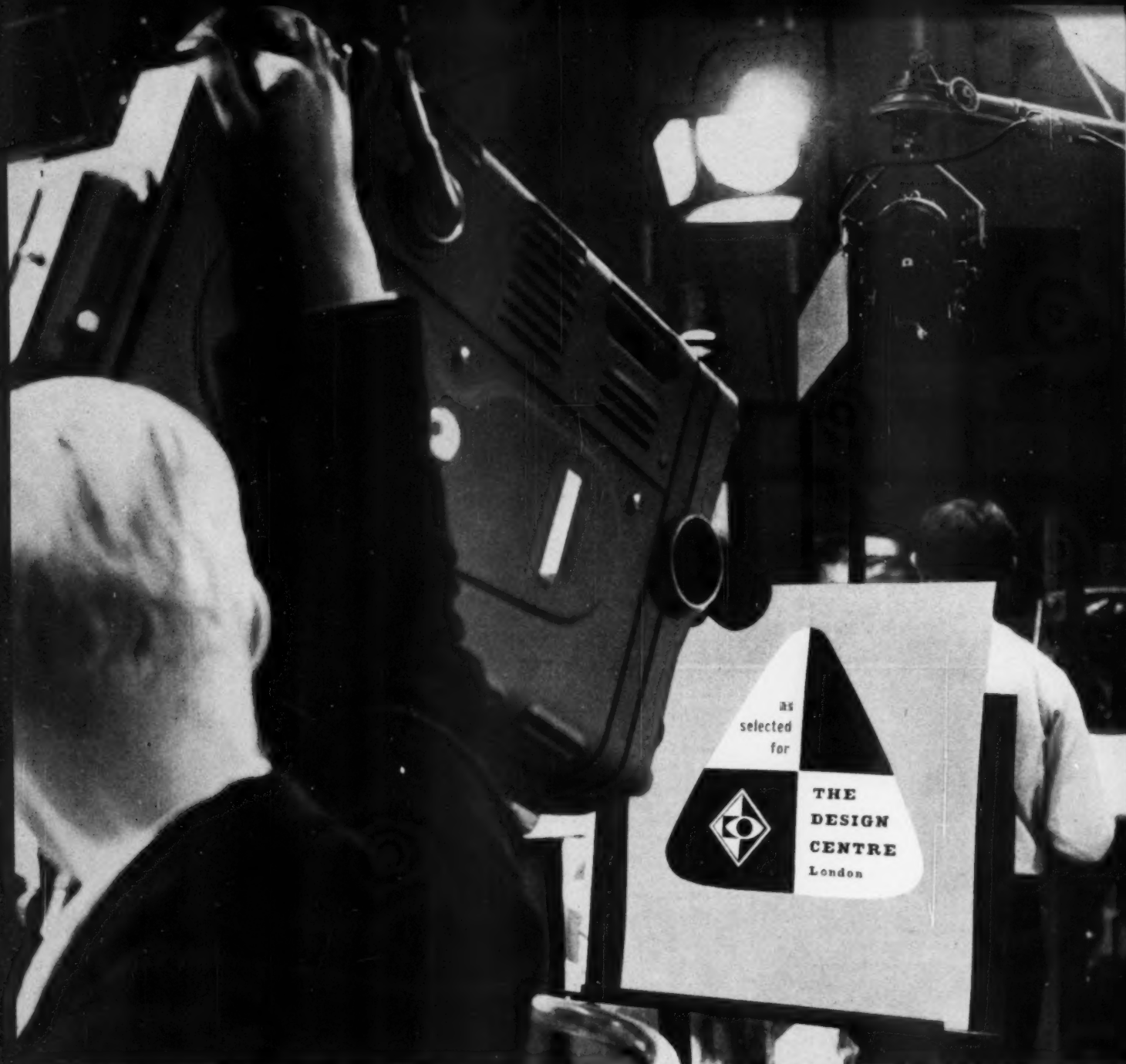


Photo: John Garner

**Millions of viewers know about the
DESIGN CENTRE LABEL Is it on YOUR product?**

For details of this label, which is available for goods displayed
in The Design Centre, write to Major-General J. M. Benoy
The Design Centre, Haymarket, London SW1

Institution; criticisms about the wearing properties of carpets often arise because the householder has chosen the wrong type of carpet for his purpose, and there is an obvious need here for a comprehensive labelling scheme to guide the shopper.

Safety devices

The Accident Prevention Division of the Midland Employers' Mutual Assurance Ltd has awarded to Neldco Processes Ltd the first of its certificates of approval for equipment considered to be of exceptional value in the field of safety. Neldco's device, the *Sala* safety block, is a spring loaded safety line with automatic braking arrangements that can be worn by workers on high scaffoldings, pylons, etc.

LETTERS

The difficult dimensions

Sir: You are to be congratulated on providing in *DESIGN* an increasing amount of factual knowledge for the designer. Nothing but good can come of this policy and the article by Brigid O'Donovan on *Seating Dimensions* (*DESIGN* 145/31-33) is particularly welcome.

When two organisations put out information there is always of course a possibility that some will assume that the two sets of ideas are conflicting. In this instance, quite the reverse is the case. The British Standards Institution is an organisation concerned with laying down standards. The research and information committee of the Furniture Development Council is concerned with providing basic information. These are not different approaches to the problem; they are complementary, and we must be careful to avoid any suggestion that they are opposing attitudes (as might be assumed by the first line of the editorial introduction to Miss O'Donovan's article).

As regards the article itself, there is just one small point I would like to comment on.

Miss O'Donovan criticises the FDC pamphlet* for its lack of guidance on how to apply the figures quoted to the task of deciding chair dimensions.

Set style

Designed for Winsor & Newton Ltd by H. A. Rothholz, this pack is representative of a comprehensive new house

This section of the pamphlet was purposely brief, and was primarily designed to provide basic information for designers.

Considerably more research is required before we would care to be dogmatic about the application of dimensions to domestic furniture. We should certainly not be dogmatic on the very interesting point that Miss O'Donovan raises about avoiding pressure on the underside of the thigh until further research has been done.

Meanwhile the basis for much of the information in the pamphlet was obtained from the more complete report: *Research Report No 8, Anthropometric Data for Chair Designers*.

I very much hope that the initiative taken by the Editor of *DESIGN* in providing valuable subjects for discussion of this kind will be continued and that those who have access to other information on the subject will be persuaded to publish it.

J. C. PRITCHARD
Director and Secretary
The Furniture Development Council
11 Adelphi Terrace
Robert Street
wc2

* *Measurements for Comfortable Sitting*, Furniture Development Council.

Sir: May I congratulate Brigid O'Donovan on the article on seating dimensions.

Except for the names it might well have been the history of a recent study we have made at these works.

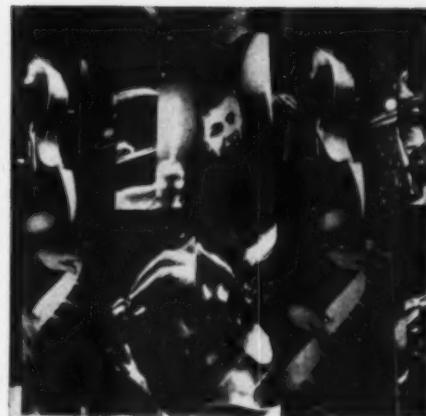
It is some satisfaction to know that other firms find the same difficulties that we do.

L. F. PULHAM
Managing Director
Kandya Ltd
Silverdale Road
Hayes
Middlesex

Biting the hand that feeds

Sir: Whoever they are, the readers of *DESIGN*, it is clear that their number does not include many of the advertisers who buy space in it. Michael Rowbottom and Kenneth Duvall are right (*DESIGN*

style that embraces stationery, advertising and packaging. The new symbol is in the top right hand corner.



Cats' curtain

This photomontage curtain, designed by Peter Keen, illustrates aspects of a dance band. It is used in the ballroom of the P & O-Orient liner Orcades. The curtain was made by Ashley, Mountney Ltd.

146/87): there is a striking disparity between editorial and advertising pages. The fact has long been known and whispered; it is left to art students to say it in print. "But where are the Emperor's new clothes . . .?"

The truth, dear Rowbottom and Duvall, is that magazines cannot afford to bite the advertising hand that feeds them. And as for the designer, the 'third force' in the situation, he spends quite half his horse-power in making a personal persuasive impact on his client, the advertiser. That leaves just 50 per cent for the actual job of designing. You get used to it.

But even without persuasion, you'd think that advertisers in *DESIGN* would make some concession to the standards of its readers, if only as a matter of hard-headed business . . .

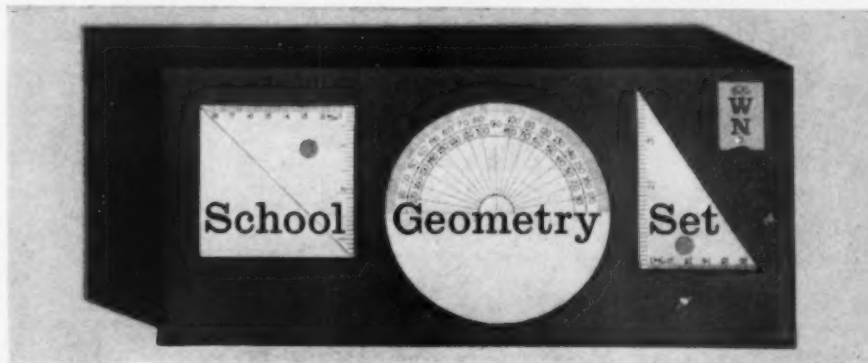
MAURICE RICKARDS
Chairman
Publicity Design Group Committee
Society of Industrial Artists
7 Woburn Square
London wc1.

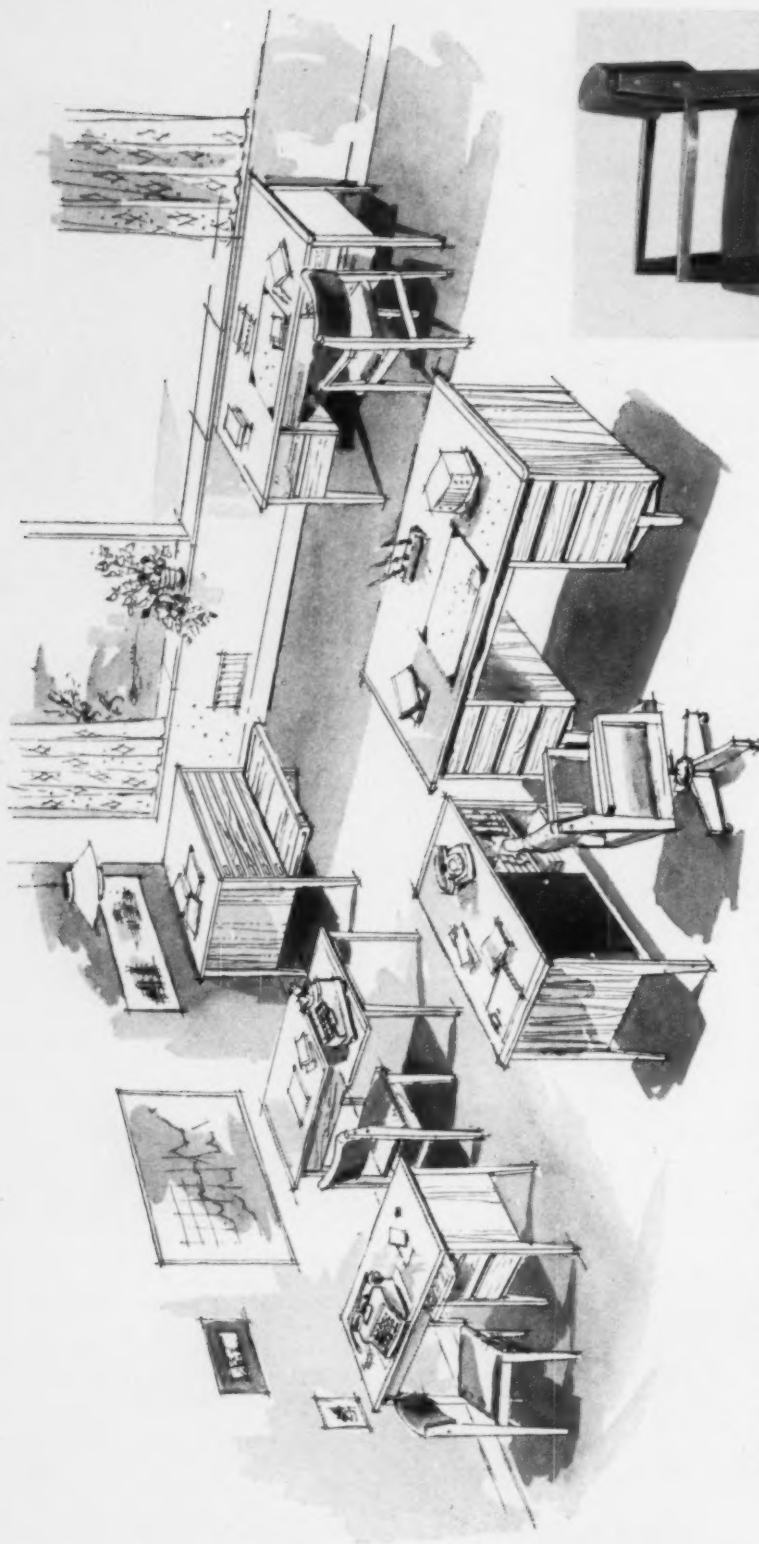
Safety plus comfort

Sir: May I, both as an experienced motorist (and rally driver), as well as the public relations consultant for the diagonal type of safety harness made by Britax (London) Ltd, comment upon Paul Treadgold's letter (*DESIGN* 145/44).

Starting with the rally angle; I am afraid your correspondent is very much at sea. In recent British rallies such as the London Rally and the RAC Rally, over 50 per cent of the crews wore safety harnesses. In the Monte Carlo Rally the number of British drivers wearing safety harnesses was probably more like 75 per cent. It is not merely a question of fearing a dreadful accident but one of comfort and relaxation. The navigator, particularly, can devote his full attention to map reading instead of looking up continuously to see whether he ought to brace himself

continued on page 89





THE Carson CC range consists of 26 separate units of inexpensive, well designed office furniture for every grade of administration up to managerial level. Every model has the same consistency of detail and finish, which when standing together, gives

an emphatic impression of harmony and good planning. The general appearance is simple functional lines, and every desk is fitted with the

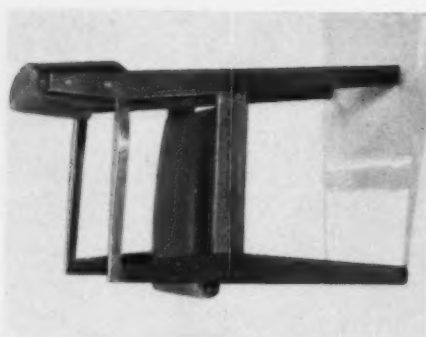
Carson plastic insert accessories tray. Deep filing drawers run on ball bearing glides fitted for suspension filing and drawer handles have been replaced by recessed mouldings to act as finger grips.

Construction is sound, finish is in satin Oak or Mahogany, in natural or medium shades.

CARSON'S

Write for the new Carson 40 page fully illustrated catalogue of wood office furniture.

CARSON BROS. (PRODUCTIONS) LTD., HONYWOOD ROAD, BASILDON, ESSEX



Illustrated is the "Chunky" CC24 armchair from the CC range, which demonstrates true posture, good design, and sitting comfort. Sells about £9-10-0 in vynide cover with Mahogany finish (also available in moquette).

for that next corner.

As for Mr Treadgold's report that the occupants of a car not wearing safety belts escaped uninjured when it turned over, this surely proves nothing. There are many accidents where people escape unhurt under the most unlikely circumstances, but there are very many more when people get hurt in quite minor, and apparently harmless accidents.

As to the question of whether women find the diagonal type of belt comfortable, there is an easy answer. Once a lady has tried such a belt she is surprised and delighted at the degree of comfort offered. It is precisely the diagonal belt which is the most comfortable for women for reasons which I should have thought were rather obvious! Much the same applies to Mr Treadgold's fears as to whether such a belt would be comfortable during a long trip; I guarantee that after the first few miles he would not even notice that he was wearing it. It should be stated here that the diagonal belt allows a considerable amount of both forward and sideways movement, complete freedom when reversing, etc. However, I do appreciate that this is one of those things that cannot be proved by figures or diagrams; the potential buyer must try the belt for himself. This is why Britax for one is encouraging garages and showrooms to fit their demonstration cars with safety harnesses.

P. R. EASTON
Managing Director
Peter Roderick Ltd
19 Leicester Square
London WC2

Stamp designer's dilemma

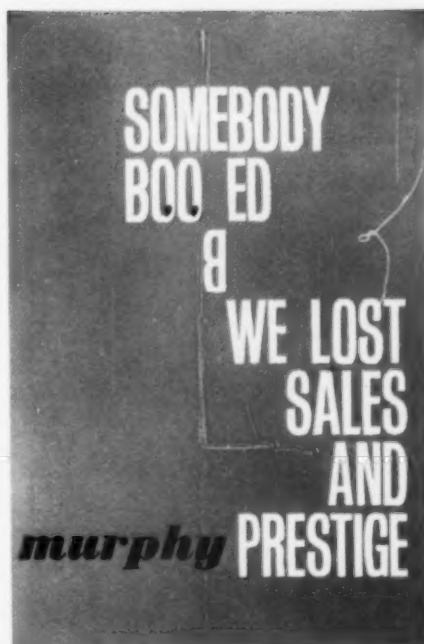
Sir: Michael Goaman's new Kenya-Uganda-Tanzania postage stamps (DESIGN 146/61) are as satisfactory a solution of the problems as could well be found; and I agree with Edgar Lewy that all concerned are to be congratulated on the result. But the series still does not "demonstrate convincingly that, in spite of all previous protestations on the part of British postal authorities, it is possible in this format to unite the royal portrait with a pictorial subject".

A British stamp designer must either unite the royal portrait with other details or isolate it. He will unite it where possible; and it is one thing to do so with formal symbols, quite another with 'pictorial' detail. In each denomination of this series Mr Goaman has very sensibly isolated the portrait by using a complete and quite arbitrary framed medallion. This may seem a quibble to those who have not tried their hand at the job: to a stamp designer it is the central predicament. If one looks at the best of the foreign 'pictorials', where this problem does not arise, one can see that true pictorial unity can be achieved.

LYNTON LAMB
Sandon
Chelmsford

A pattern for pylons

Sir: Until a new method of transmission line design is evolved, the conventional pylon will remain a vertical feature punctuating a relatively flat landscape; creating a sense of power through its scale; neither to be camouflaged nor to be unnecessarily



Quality posters

The first two examples of a new series of nine posters designed for Murphy Radio Ltd by James Reeve. Mr Reeve, product and publicity designer at Murphy, has pro-



duced this range of posters - which is intended primarily for use in the factory - as part of a campaign to keep up production quality.

hidden, although integrated with topographical features.

In form, the structures should be light, restful and graceful, like Tubewrights Ltd new pylon (DESIGN 144/67), not eye-catchingly dynamic like the French design. It should retain a continuous rhythm through repetition of alike-shapes, except where changes in direction necessitate structural differences - breaks in the rhythm to be sited with great care.

J. E. ATKIN
11 Chestnut Street
Ruskington
Sleaford
Lincs

Audacious defence

Sir: L. E. Wingfield's criticism of the *Audacity* design by J. Laurent Giles (DESIGN 142/79) brings me rapidly to her (*Audacity's*) and his (Mr Giles') defence.

It is vitally important that any small boat designed to sail offshore should meet certain safety requirements. A little history may help. After the war the low limit of the *Fastnet Race* was reduced to 27½ ft of rating, that is to say, a boat of between 29 and 35-ft waterline according to type. But with the rise in cost of labour and materials, and the steady development in design of hull, rig and equipment, smaller boats are being used for much the same purpose.

In 1950 the Junior Offshore Group was formed to develop yachts of between 16 and 20-ft waterline capable of racing offshore in safety. The principal requirement of the safety recommendations says a

minimum stability figure should be achieved. A second rule calls for minimum buoyancy and a third lays down a maximum volume for the watertight cockpit. Another requirement is that the area of the companionway be limited to 3 sq ft and that the opening must be 3 inches above deck level.

So well considered were these requirements that Mr Giles designed *Sopranino* and, with a waterline length of only 17 ft 6 inches, she was sailed across the Atlantic in 1952. A successor of *Sopranino*, *Trekka*, was also designed by Mr Giles. John Guzzwell, who built her in Vancouver, has recently completed a round the world voyage in her! *Audacity* is the outcome of immense experience with these earlier designs. Extremely ingenious design has provided accommodation for four berths whereas *Sopranino* had only two, on a waterline length only one ft less than *Audacity*. The market research methods used may have given a few hints but I question its value compared to the tremendous experience of a highly qualified designer. Might not the *Edsall* car have been a different story with a designer of equivalent experience?

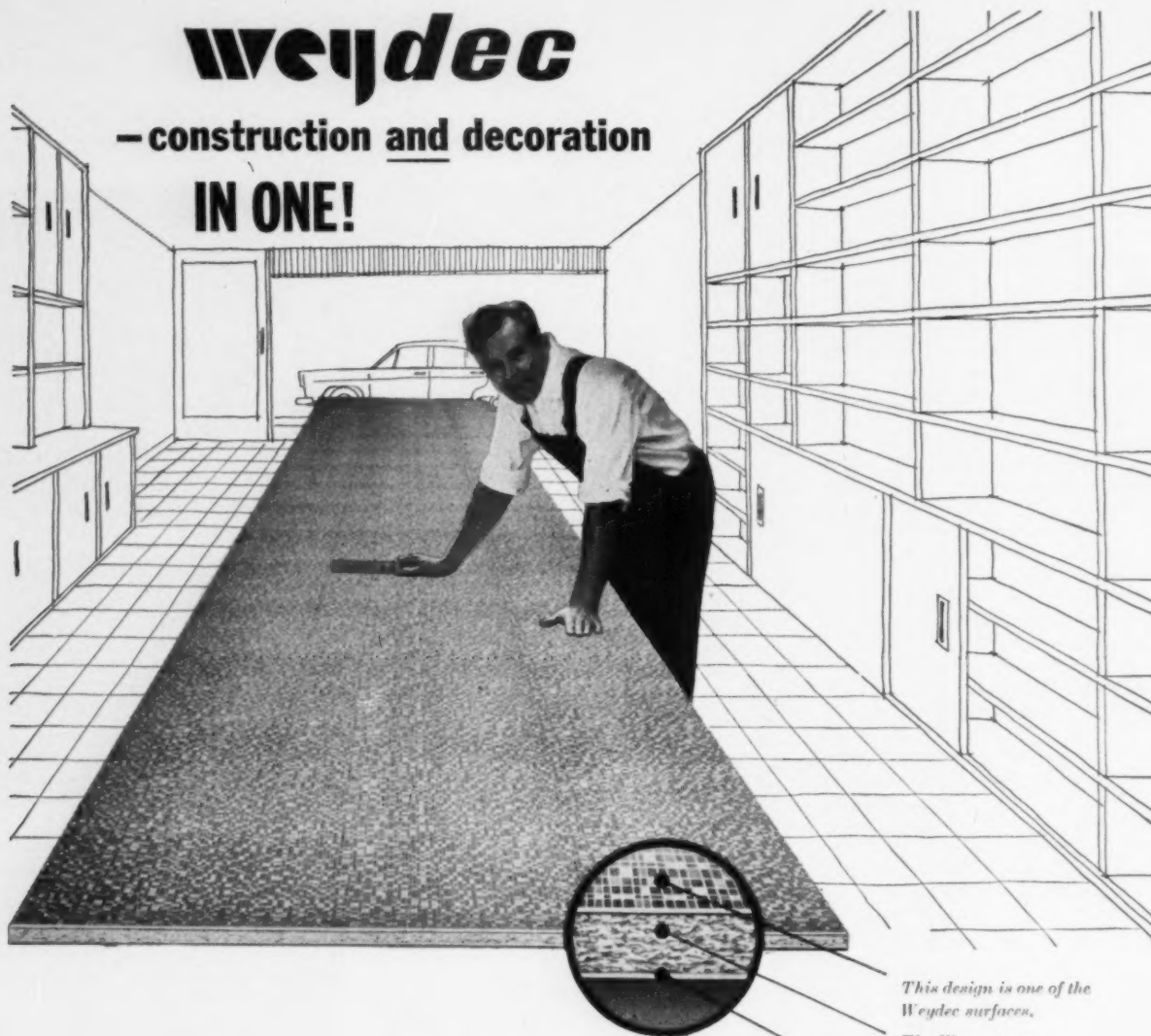
RONALD BROOKES
Hill Cottage
Feckenham
Worcestershire

L. E. Wingfield replies: "Ronald Brookes presents an admirable survey of offshore sailing requirements, but I have said that these 'would be accepted as a necessary safety measure by agile and experienced

continued on page 91

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yachtsmen, prepared to sail offshore in any weather'. *Audacity* shows great promise for offshore racing but the present layout is not ideal for other forms of sailing. For extended cruising it would be advisable to reduce the number of berths in favour of better cooking facilities and food storage.

"Ordinary yachtsmen, limiting their sailing to comfortable little trips in settled weather, would be unnecessarily inconvenienced by the restricted cockpit and companionway, especially with four persons on board. However, they might still prefer *Audacity* to the conventional, heavy family cruiser.

"The *Audacity* is an outstanding design achievement but naturally it has its limitations. Some of these must be accepted by the user but others could be overcome by alternative variations of the basic design."

Order in the house

SIR: I find your journal most interesting and must admit I agree with most of your criticisms of other people's designs, but is it not about time you put your own house in order and put the caption number of a photograph nearer to the one it relates to and not in a position which is equidistant between two? I think a glance through some of the recent issues of *DESIGN* will show you what I mean.

R. BRIERLEY
57 Manor Road
Shaw
Lancashire

Better litter bins

SIR: The illustrations in your article *Better Litter Bins* (DESIGN 144/35-39) are doubtless conducive to tidiness, but some of the items do not appear to consider the well being of the toddler, who must regard such street furniture as 'a bit above him'.

In this connection, the underside of suspended litter bins merits consideration from the standpoint of safety. It is perhaps true that small children have more freedom of movement in parks, at fairgrounds and during processions than in normal sorties and consequently the hazard of collision with the under-

The Satellite litter bin made by Cartem Engineering Ltd - see Better Litter Bins.



New terminal

Part of the new Ocean Terminal in Southampton, with interiors designed by Heal's Contracts Ltd, in collaboration

with the Southampton Docks engineer and architect. The furniture in this illustration was designed by Henry Long.

side of *Hybrid 3* or, more particularly, with the downward pointing fasteners of *Satellite*, BELOW LEFT, should have been considered.

It is surprising to find that a nosing strip has been provided on *Satellite*, presumably to protect adults, whereas the fastening grips, in league with the base of the stand, might well conspire to inflict a head injury on the unwary wandering child of the appropriate stature.

A. J. WATKINS
3 Ash Walk
Alkrington
Middleton
Manchester

BOOKS

Newspaper design

Allen Hutt, Oxford University Press, £2 10s

Allen Hutt's knowledge of the technicalities of newspaper production is very considerable and most of his theories concerning newspaper make-up and typography are sound.

In fact, apart from being somewhat pontifically written in parts ("Only at his peril dare the newspaper man cull his passing fancy from the luxuriant display of type faces . . ."), the only thing wrong with this highly informative book is a curious lack of taste in the selection of certain of the specimens which demonstrate Mr Hutt's principles in practice.

For instance, in his chapter *The Feature Pages*, he points out that "A well-sized, well-placed picture with a feature should attract as much attention as the headline to which it is linked - even physically linked in the sense that heading and picture are made as a composite block, with the type stripped in and perhaps partly reversed as well". Unfortunately the illustration which accompanies this sound piece of advice, a page from *Reynolds News*, carries a photograph of a yacht cropped roughly to the shape of a deckle-edged parallelogram and over-printed with a Rockwell Shadow headline.

In the same chapter is a short section headed *Type-Processing and Decorative Headings* in which Mr Hutt

quite rightly says "The three main methods of processing lines of type - reversing to white, type-on-tint, stippling - can all be usefully employed for varying the display of, and imparting a decorative note to, the feature pages". But the specimens he chooses to illustrate these three main methods are unimaginative in the extreme.

One wonders why Mr Hutt has not included in this section at least one of Michael Rand's brilliant graphic projections which he produces in abundance for *The Daily Express*; for Mr Rand's influence on the feature pages of the popular Press is considerable.

Again one hits an air-pocket when one starts looking at the illustrations accompanying a necessarily short but sound chapter on periodicals and magazines. Here the illustrations consist of a few pages of assorted type faces (Choc and Vesta being among them), an uninteresting magazine page and half a page of type faces that Mr Hutt considers mix well - example - Thorne Shaded with Ashley Script!

Newspaper Design has been warmly praised in several journals by a man who is undoubtedly one of our greatest living newspaper editors - Arthur Christiansen. This in itself makes the book well worth reading for anyone interested or involved in newspaper make-up and typography.

But it should be read with caution, for Mr Hutt's aesthetic standards fall far short of his technical know-how.

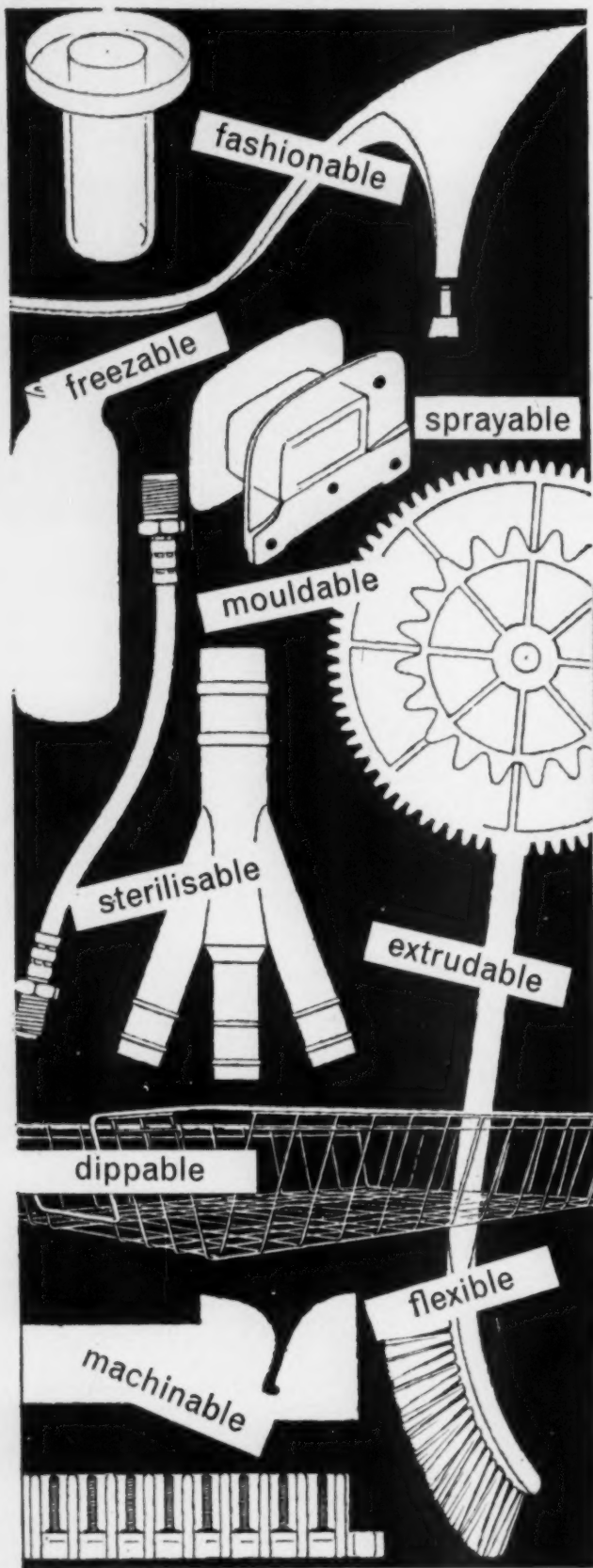
RAYMOND HAWKEY

Supermarkets of the 'sixties

The Loewy Report to the Super Market Institute, Inc., Chicago, 2 vols, Super Market Institute Inc, 500 North Dearborn Street, Chicago 11, Illinois, U.S.A.

Like it or not, British retailing inevitably reflects the American scene. Department store, unit-price variety chain, specialist multiple, self-service shop, supermarket, discount house - all these in turn have dictated the pattern of our own shops. This year-long study by the Raymond Loewy Corporation therefore commands attention. It is worth the effort to struggle through foreword, preface, acknowledgment and introduction; to seek the essence of the

continued on page 93



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argument in the characteristic welter of slang, jargon and turgid verbosity.

The authors may insist that retailing is an art. But undoubtedly this volume witnesses yet again the addiction of the American businessman to every form of research. (How does he find time to digest all the facts and figures?). Even the small-time shopkeeper is not immune. We read of one who carried out a poll to discover the size of his customers' gas bills. Finding these to be low, he deduced that there was little home cooking going on, and only then did he venture to stock delicatessen.

The theme of the Loewy study slowly emerges: that the Cinderella departments of the supermarket, namely those offering non-food lines, can be developed without detriment to that 'food image' which remains the self-service store's essential trade mark.

In the aim to lift operators to a new "profit plateau" every aspect of merchandising and sales promotion is touched upon. But by the time we reach the second volume, which consists of a series of plans and drawings, we realise that what most interests the Raymond Loewy Corporation is the subject cultivated by the brother organisation Raymond Loewy Associates. Margins and mark-ups demand analysis; but more congenial are questions of product, package, building and shopfitting design.

The plans and drawings are stimulating, even if the latter share the flattering overstatement of so many artists' impressions and architects' doodles. "In the sketch", runs one caption, "the artist has exaggerated the aisle space to better illustrate the departmental feeling achieved by this layout." Yes... but these sketches nevertheless provide as

pretty a picture gallery of shopfittings as we have seen for many a day.

Not least significant is the evidence that the wheel is turning full circle. The department store that has been converted to visual merchandising, with open floors devoted to self-selection, is now scarcely distinguishable from the supermarket with its 'personalised' non-food sections. British designers concerned in problems of shop design cannot but heed the paradox.

ALLAN FLOWMAN

Design and detail of the space between buildings

Elizabeth Beazley, Architectural Press, £2.25

The clutter of the 'floorscape' between buildings is something we have become so accustomed to that we almost accept it as normal and inevitable. Uniform concrete paving rings our streets; our roads are a sea of bleak concrete or tarmacadam; wire fencing is everywhere; most municipal planting is a tragedy of the inappropriate. All these facts of our everyday life cry out for conscious design not only of the objects in the urban landscape but also of their relationship one with another and with their surrounding buildings.

It is a pleasure to pick up Elizabeth Beazley's book and find that, at last, the whole field has been surveyed. Here is a compendium of valuable material that is not readily available. It deals with paving materials, walls, fences, gates and bollards. It collects together all the available information and references. It discusses the character, availability and wearing qualities of different materials, the relative merits of constructional methods, and the principles governing the design of all these elements.

The important section devoted to planning is mainly concerned with the effect of the motor car on design problems of space between buildings. The planning of paths and roads, the parking of motor vehicles, motor cycles and bicycles are all well treated. Valuable advice is also given about the use of changes of level and steps. So often in the great architectural ensembles of the past it has been the treatment of the approaches to the buildings that has completed the architectural conception. We learn that the Spanish Steps in Rome, an example of an exceptionally long flight of steps, has never more than 12 steps without a pause; and fascinating comparisons are given of the 'going' and 'rise' of outstanding historic flights of steps.

This book puts into the hands of the architect, the town planner and the landscape architect a valuable collection of reference material, although it makes no pretensions to lay down principles on how these various elements are to be applied in the design of the space between buildings. This is a first-rate addition to our vocabulary; but the creation of the prose and poetry still has to be accomplished by the urban designer.

ANTHONY GOSS

Kerly on trade marks

R. G. Lloyd, Sweet & Maxwell Ltd, £7.75

For a long time trade mark lawyers and practitioners have been well served by successive editions of Kerly, but since the seventh edition appeared nine years ago there have been a number of important

decisions in trade cases as well as a new merchandise marks enactment and various new rules and orders. R. G. Lloyd has ably revised the text to bring it up to date, while at the same time improving its presentation and layout. New sub-headings have been inserted but, by skilful pruning and more economical arrangement of the text, the total number of pages, excluding indexes, appendixes and the like, has been reduced from 727 to 486.

The present edition, like its predecessor, covers more than adequately all aspects of the law relating to trade mark applications, registered trade marks and the common law of "passing off". It also contains chapters on closely related fields of law, such as the Merchandise Marks Acts, trade libel, trade secret, trade name, and the international convention, as well as tables of cases, appendixes containing texts of relevant acts, etc., and a very useful index.

An inherent disadvantage of such a comprehensive textbook is that subject matter on the fringes of the main theme can only be covered in broad outline. Thus, section 16 of the *Merchandise Marks Act 1887* is dismissed in two lines without any reference, even in a footnote, to the possibility of recording trade marks, etc., with the customs authorities to facilitate detention by them of illegally marked goods. This omission appears incidentally to be a legacy from previous editions.

Kerly is, however, primarily a book on the *Trade Marks Act 1938* and the common law of "passing off", and this edition covers such subjects in a way which should satisfy the most exacting requirements.

A short history of technology

T. K. Derby and Trevor I. Williams, Oxford University Press, £1.18s

Technology - "the science of the industrial arts", as the dictionary defines it - is sometimes interpreted as the application of science to industry. If this were so, any history of technology would be severely restricted for, as the authors of this book point out, it was only after the Industrial Revolution that the findings of science came to be applied to any noticeable extent.

For the writers, technology dates from the time when the "knowledge and devices by which man progressively masters his natural environment" began to be respectively acquired and constructed. Thus, with so vast a subject to treat, a great deal of the book's value depends upon its organisation; and the authors have dealt most efficiently with this problem. The book is divided into two major sections: the first covers the ground up to 1750, a date which is postulated for the beginning of the Industrial Revolution in Britain; the second part deals with developments between 1750 and 1900. (The authors believe that twentieth century technology is too confusingly immediate to be viewed in an historical light.)

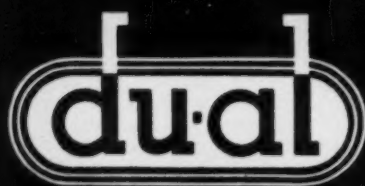
Within these two divisions, different aspects of technological development are discussed in each chapter so that, at times, one may wish to relate various developments in the time scale; the timetable provided at the end of the book should therefore be used as a chronological guide while the book

continued on page 95

Knockdown stand

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P. 185



HB. 255



S. 186



AY. 237



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is read. For this is a book which can be read from cover to cover and yet is of considerable value for reference purposes; not only to ascertain the origins of machines and techniques but also to discover the historical circumstances of their development. The authors have aimed "as much at a technological history as a history of technology". They describe, for example, the conditions which first brought Britain to industrial revolution, and they do this as much without prejudice as when they later on discuss the greater inventive skill which developed so notably in America and Germany.

This is an unbiased history handling a great complex of development in a very clear manner. It will become a standard work.

W. H. MAYALL

The landscape of roads

Sylvia Crowe, Architectural Press, 18s 6d

If you were to ask any random member of the public what, in his opinion, were the three factors that have most contributed to the spoliation of the English countryside, he would almost certainly say ribbon development, followed closely by pylons and motors. The first of these is now under control by Act of Parliament. The second has already been ably described in Sylvia Crowe's *Landscape of Power*. The third is perhaps the most insidious factor of all, because the impact of the car is found everywhere, in town as well as country. The solitary landscape is as much a magnet as the city centre, and its true character can as easily be destroyed by those very people who need it the most.

History has shown that the road in itself can be a romantic and agreeable addition to the landscape of any country, and it is probable that the modern road has acquired its bad reputation because it relies too much upon the individual engineer. The days are over when an engineer, such as Brunel, could contain within himself the balance of science and art, and we find that the scientist has, in almost every physical sphere, outstripped the artist.

In the modern world the Minister of Transport, whose expenditure per annum is over £100 million, relies upon a voluntary committee of gifted laymen to advise for perhaps one day a month upon the landscape of roads. Miss Crowe's excellent survey of the subject leaves one in a frame of mind that is

more of sorrow than of anger; for she presents to us in eight chapters proof of the value of conscientious professional design that seems unanswerable.

G. A. JELICOE

Typographica 2

Editor Herbert Spencer, Lund Humphries, 12s 6d

How much more convincing any art magazine's aesthetic pronouncements are when they are presented in a contemporary, well designed format. This issue of *Typographica* is good looking, and the contents are genuinely interesting.

I was impressed by the way the articles complement each other. The various activities of the Dutch lithographer, De Jong, are reviewed, together with illustrations of recent exhibitions; there is an article on the books of Abram Krol, the French painter and engraver, and there are pages devoted to the work of Max Huber, one of the better Italian graphic designers; there is also an amusing 'human alphabet'.

The process is explored by which George Heard Hamilton has deciphered, translated and designed Marcel Duchamp's *The Green Box*—children, their mummies and Dadaists, should be tickled.

The examples of the work of the brilliant American design firm of Brownjohn, Chermayeff and Geismar are accompanied by an excellent text.

I was impressed by the magazine's air of dedication; other publications could well profit from it.

BOB GILL

Modern publicity, 1960/1961

Editor Wilfrid Walter, Studio Books, £2 5s

Wilfrid Walter says of this thirtieth anniversary edition of *Modern Publicity* that "he wonders if the editor of the first edition could have foreseen the tremendous changes that have taken place in the visual presentation of all forms of advertising". To do this he would have had to foresee the needs of our mass production economy.

This is Mr Walter's second year in the editorial chair and once again he has been faced with an unenviable task of selection. Over 12,000 examples were submitted for inclusion from 28 countries, the greatest amount coming from Germany, Japan, Sweden and the United States. The mixture is much as before but with the promised section on TV and film advertising. This must have been a difficult one to present: cartoons and masked photography come out best in still reproduction, but on the other hand this may not be the most advantageous form of presentation for films. Posters and press advertising provide the most extensive and interesting part of the book. Some examples from the USSR are given, but they are not typical of what is available from that country with its distinctive typography.

Posters are the most interesting visually and still provide extensive opportunities for the photographer and the artist. This field is currently a study for motivational research but then, unhappily, it might go the way of packaging—the duller section in the book. Editorial comment has been extended, and the size of colour reproductions decreased in order to get more in. This is not so bad as it sounds. Annuals such as this one could suffer from a routine malady, indistinguishable from one year to the next. *Modern*

Publicity removes this objection by the extent of its coverage (about 500 examples from 28 countries) and its high standard. However, one could wish for still more colour.

DAVID IGGULDEN

Books received

The changing shape of things, Paul Redmayne, John Murray, 15s

The seeing eye, Freda Lingstrom, Studio Books, 35s

This is United Steel, The United Steel Co Ltd

Porslin Nr 5-6, A B Gustavsbergs Fabriker, Gustavsberg, Sweden

Eskimo sculpture, Jørgen Meldgaard, Methuen & Co Ltd, 15s.

1960 book of the year, Shell-Mex and BP Ltd

This month's cover

This month's cover was designed by F. H. K. Henrion, one of this country's most well known graphic designers. He runs his own consultant design organisation, Henrion Design Associates, and is at present working on new house styles for Associated Industrial Consultants Ltd, Wates Ltd, the builders, Cox of Watford Ltd and British Olivetti Ltd, as well as packaging ranges and product design.

Addendum

DESIGN 145/37: the term 'Vanitory' used in the caption to the Johnson Brothers' Ltd lavatory basin (illustration 7), is a registered trade name of Formica Ltd.

DESIGNERS in this issue

J. A. Arthur, ARIBA; Gerald Bendor, DEBICA; Ian Bradbery, MIBA; H. E. B. Cavanagh, ARIBA; Hulme Chadwick, ARIBA; ARCA; PHA; Kenneth Clark; Eric Clements, DEBICA, MIBA; Theo Crosby ARIBA; F. C. Curtis, Dr Ing, ARIBA; Lucienne Day, ARCA, PHA; Aidron Duckworth; Norbert Dutton, PHA; Arthur Edwards; John Ernest; Kenneth Grange, PHA; Frank Guille, DEBICA, MIBA; S. Hardy, ARIBA; W. R. Headley, AADIP, ARIBA; F. H. K. Henrion, MBE, RDI, PHA (cover); Ronald Ingles, PHA; Peter Keen; Clive Latimer, MIBA; Henry Long, MIBA; R. L. Moorcroft, ARIBA; H. H. Powell, MBE, PHA; H. H. Pittsaway, ARIBA; James Reeve, MIBA; John & Sylvia Reid, A/ARIBA, DIPATCH, P/PHA; H. A. Rothholz, MIBA; Douglas Scott, PHA; Neil Shakerly; Oliver Stott; A. N. Thorpe, PHA; John Vale, MIBA; George Williams, MIBA; L. E. Wingfield, MIBA; Geoffrey Woolard; Edward Wright.

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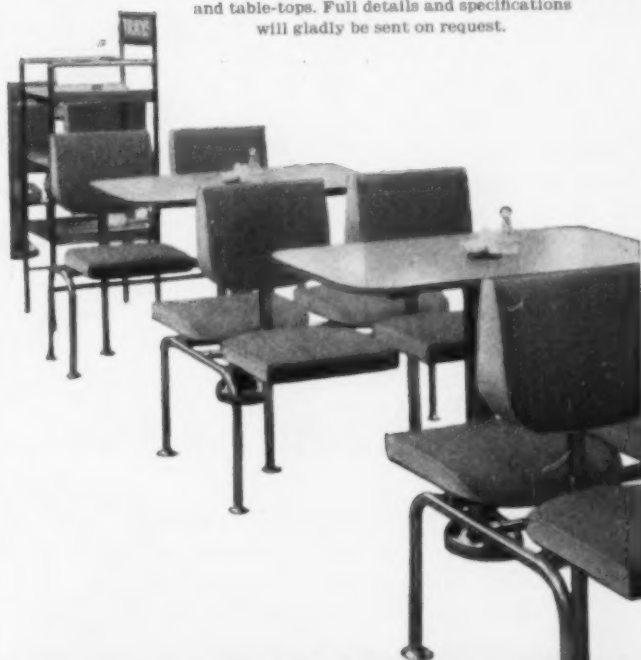
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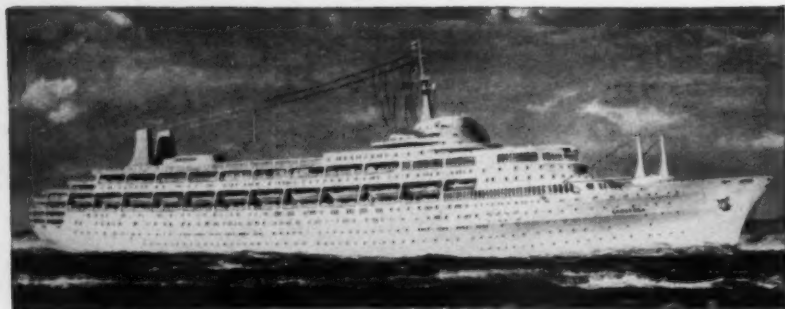


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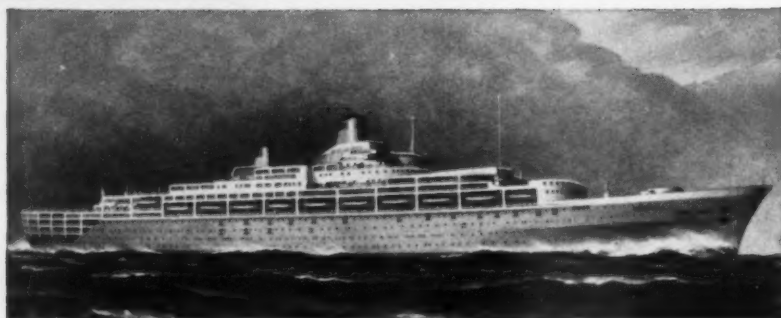
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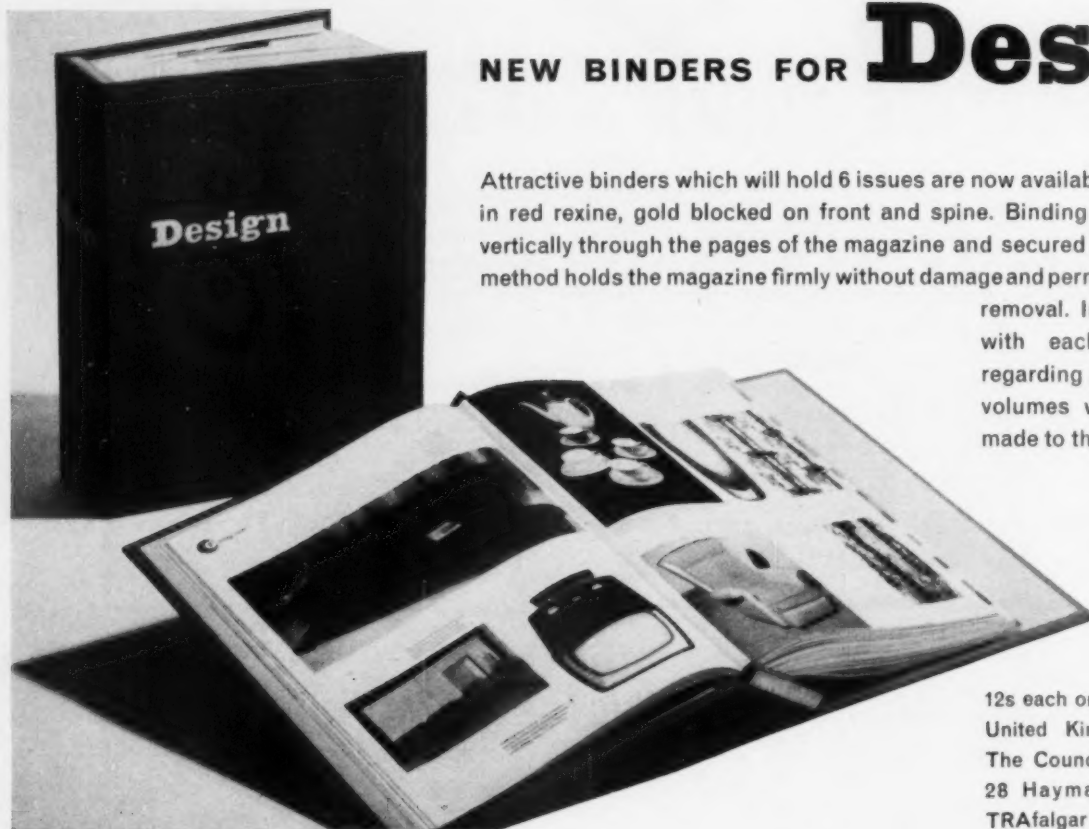
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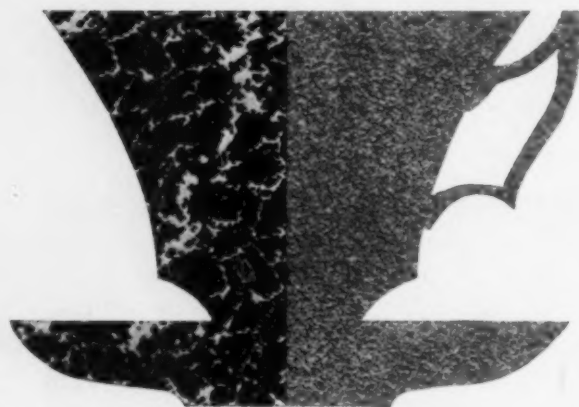
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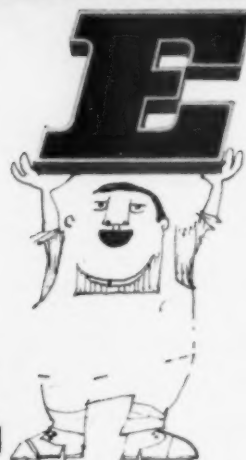
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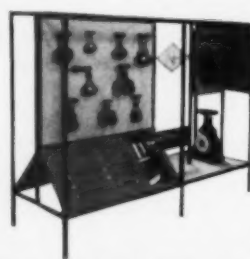
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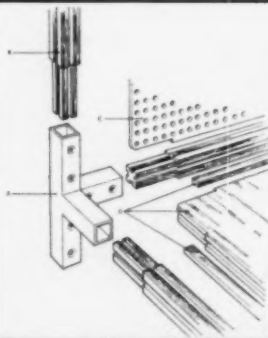
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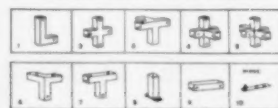
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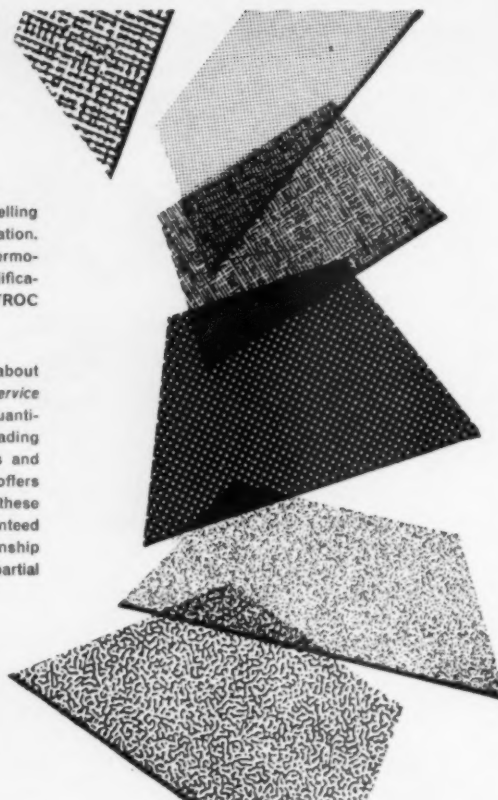
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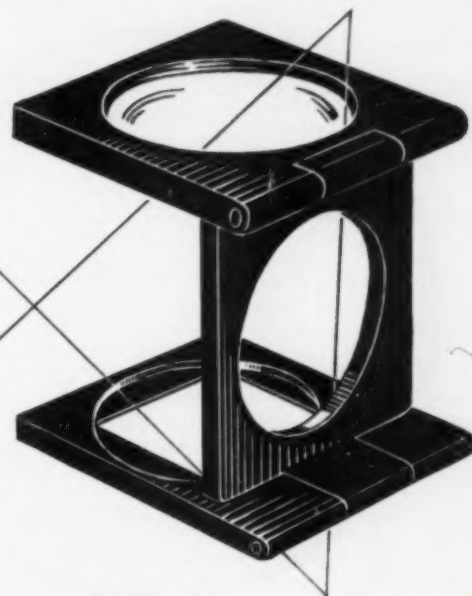
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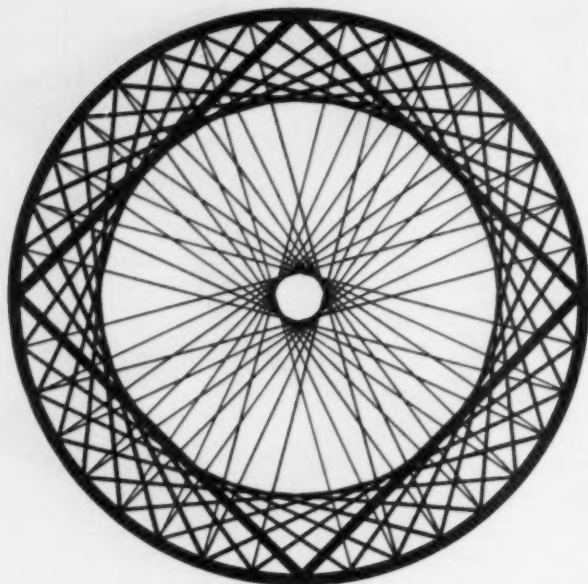
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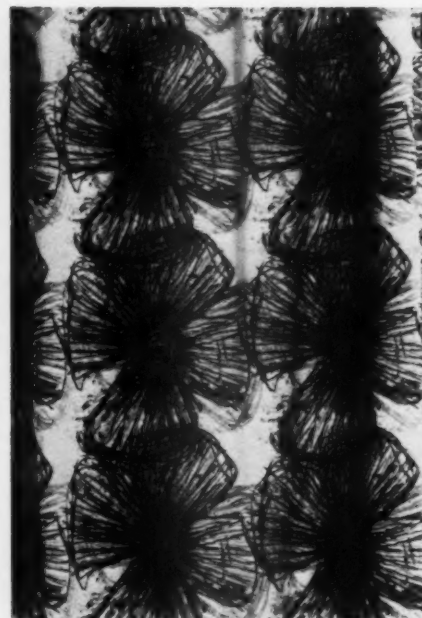
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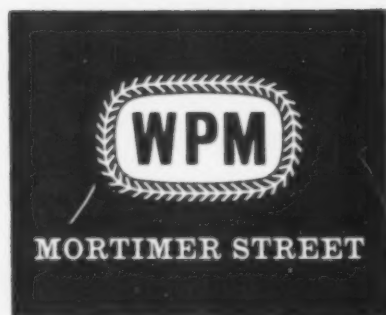
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